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KINGSTON ONTARIO CANADA

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Queen's University

KINGSTON, CANADA



INCORPORATED BY ROYAL CHARTER IN 1841

CALENDAR OF THE FACULTY OF ARTS

EIGHTY-SECOND SESSION

1922-1923

4
23

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KINGSTON, ONTARIO

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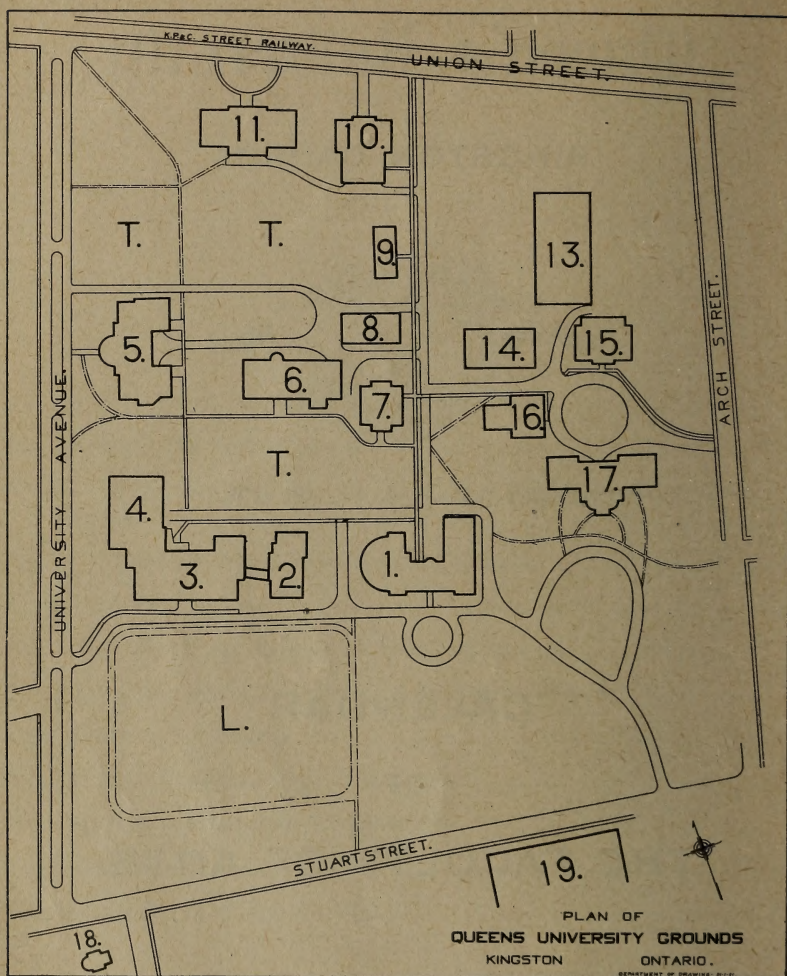
INCORPORATED BY ROYAL CHARTER IN 1841

CALENDAR OF THE FACULTY OF ARTS

EIGHTY-SECOND SESSION

1922-1923

KINGSTON
PRINTED FOR THE UNIVERSITY BY THE JACKSON PRESS
1922



PLAN OF
QUEENS UNIVERSITY GROUNDS
KINGSTON ONTARIO.

1, Theological Hall, containing on the first floor the offices of the Registrar and Treasurer, the Biological Laboratories, and the Museum; and on the second floor the Principal's Office, Convocation Hall, and the Library. 2, Cafeteria. 3, Kingston Hall or New Arts Building. 4, Grant Hall. 5, Ontario Hall (Physics, Geology, Mineralogy). 6, Fleming Hall (Electrical Engineering). 7, Carruthers Hall (Civil Engineering). 8, Mining Laboratory or the Mill. 9, Mechanical Laboratory. 10, Nicol Hall (Metallurgy). 11, Gordon Hall (Chemistry). 13, Skating Rink (the new rink fronts on Arch Street. 14, Gymnasium. 15, Medical Laboratories. 16, Medical Building. 17, Principal's Residence. 18, Observatory. 19, Kingston General Hospital. T, Tennis Courts. L, Small Athletic Field. The main Athletic Field with the Stadium is one block west of University Avenue.

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THE ACADEMIC YEAR*

THE EIGHTY-SECOND SESSION of the University will begin on Wednesday, September 27th, 1922, at 8 a.m. Convocation will be held on Wednesday, May 9, 1923.

1922

- April 24*—Last day on which extra-mural students may add classes for the summer session without extra fee.
- May 1*—Last day on which extra-mural students may add classes on payment of extra fee.
- May 20*—Written notice due at the Registrar's Office of candidates' intention to compete for Matriculation Scholarships.
- July 3*—Summer School opens.
- July 15*—Last day for receiving applications, accompanied by fee, from extra-mural students for new centres for the Arts Supplemental examinations.
- Aug. 1*—Last day for receiving applications, accompanied by fee, from candidates for the Arts Supplemental examinations.
- Aug. 11*—Summer School closes.
- Sept. 5*—Arts Supplemental examinations begin.
- Sept. 20*—Last day of registration for extra-mural students without extra fee.
- Sept. 27*—Classes open in Arts at 8 a.m. Registration begins.
- Sept. 29*—Last day of registration for intra-mural students without extra fee.
- Oct. 6*—Last day of registration for intra-mural and extra-mural students who have not previously obtained from the Faculty permission to register later.
- Dec. 1*—First day upon which extra-mural students may transfer to intra-mural classes.
- Dec. 1*—Last day for receiving applications, accompanied by fee, from extra-mural students for the January examinations.
- Dec. 20*—Christmas holidays begin at 5 p.m.

1923

- Jan. 4*—Classes re-open at 8 a.m.
- Jan. 11*—Mid-session examinations begin.
- Jan. 16*—Last day for receiving applications from candidates for the M. C. Cameron Scholarship in Gaelic.
- Jan. 18*—Second term opens at 8 a.m.
- Feb. 14*—Ash Wednesday: a holiday.
- Feb. 15*—Last day for receiving applications accompanied by fee, from extra-mural students for new centres for the April examinations.
- Mar. 1*—Last day for receiving applications, accompanied by fee, from extra-mural students for the April examinations.
- Mar. 15*—Last day for receiving applications and fees for degrees.
- Mar. 30*—Good Friday: a holiday.
- April 1*—Last day for receiving essays for University Prizes and applications for Arts Research Scholarships.
- April 18*—Class work closes at 5 p.m.
- April 20*—Examinations begin.
- April 24*—Last day for extra-mural students to add classes for the Summer Session without extra fee.
- May 1*—Last day for extra-mural students to add classes for the Summer Session with extra fee.
- May 7*—Statutory meeting of the Senate for awarding Standing, Prizes, Medals, Honours, and Degrees.
- May 9*—Convocation for conferring Degrees, announcing Honours, and distributing Prizes and Medals.

*The term "Academic Year" used in connection with Regulations and Courses of Study refers to the period extending from October 1 to September 30.

1922

JANUARY							FEBRUARY							MARCH							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	..	..	..	1	2	3	4	..	..	..	1	2	3	4	..	..	..	..	..	..	1
8	9	10	11	12	13	14	5	6	7	8	9	10	11	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30	31	..	..	..	..	26	27	28	..	..	..	..	26	27	28	29	30	31	..	23	24	25	26	27	28	29
														30													

MAY							JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	1	2	3	4	5	6	..	..	..	..	1	2	3	..	..	..	..	..	..	1	..	..	1	2	3	4	5
7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
28	29	30	31	..	..	..	25	26	27	28	29	30	..	23	24	25	26	27	28	29	27	28	29	30	31	..	..
														30	31												

SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	1	2	1	2	3	4	5	6	7	..	..	..	1	2	3	4	..	..	..	..	..	1	2
3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
24	25	26	27	28	29	30	29	30	31	..	..	..	..	26	27	28	29	30	..	..	24	25	26	27	28	29	30
																					31						

1923.

JANUARY							FEBRUARY							MARCH							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	..	..	..	..	1	2	3	..	..	..	..	1	2	3	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31	..	..	..	25	26	27	28	..	..	..	25	26	27	28	29	30	31	29	30	..	..	..	..	..

MAY							JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	3	4	5	6	7	8	9	1	2	3	4	5	6	7	..	..	1	2	3	4	5
6	7	8	9	10	11	12	..	..	..	..	..	1	2	8	9	10	11	12	13	14	5	6	7	8	9	10	11
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25
27	28	29	30	31	..	..	24	25	26	27	28	29	30	29	30	31	..	..	..	..	26	27	28	29	30	31	..

SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	.	.	.	.	.	.	.
.	1	.	1	2	3	4	5	6	1	2	3	2	3	4	5	6	7	8
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10	9	10	11	12	13	14	15	
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17	16	17	18	19	20	21	22	
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24	23	24	25	26	27	28	29	
23	24	25	26	27	28	29	28	29	30	31	.	.	.	25	26	27	28	29	30	.	30	31	.	.	.	.	.
30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TIME TABLE OF LECTURES

When a Science class has only one or two lecture periods a week, the class number is followed by a designation of the day or days of meeting (M=Monday, Tu=Tuesday, etc.)

Classes held on Mon., Wed. and Fri. at					Classes held on Tues., Thur. and Sat. at				
	8	9	10	11		8	9	10	11
Bacteriology		12b, W, F 10a, W, F					12b		
Biology		15a, M, W 12a, W, F 13b, W, F	24a, 5b 25b	11, M, 22a, W 23b, W		10, Tu 18, Th	1, Tues.	2, Tu, Th	21, Tu, Th
Chemistry		1 106b, F 171a, M, F	45, M 106b, F	21, W, F 141b, M, F		45, Sat.	41, Tu, Th	71, Tu, Th 75 hf, Tu, Th 101, Tu, Th	2, Tu, Th 121, Tu, Th
Economics	52a, 59b, 12a, 39b	22a, 60a, 61b	2, 21b, 42a	17a, 50a, 16b		66a, 54a, 56b, 67b	25a, 10b	1, 64a, 65b	62a, 63b
English	10a, 14b 1 (Med.)	2 (A) 42a				1	2 (B) 22a, 24b	4a, 20b	27a, 29b, 44b, 5b
French	20a, 22b	1 (A & B)	10			1, (Med.)	11a, 12b, 13a 1 (C), 21b		
Geology		2	15, M, 19, W	1, 15, W			13, Tu, Th	10, Tu, Th	15, Tu 18, Tu, Th
German	12b, 31a, 22a	3a, 21b		23b, 32a		A	1	B, 25a, 26b	11a
Greek				2			11a, 12b, 14a	1, 10a	A, 13b
Hebrew	2					1			
History		12				16	2	20a, 21b, 4	1, 5a
Italian	Hours	to		3, 14b, 15a arranged					
Latin		11a, 12b	1 (A)	25a, 28b				1 (B), 10b, 13a	2
Mathematics	1, 1h, 12a, 14b	17b, 18a, 13a		10a, 11b		2, 16b, 15a	20b		3, 7b
Mineralogy	2, W		1, W, 2, F	12, F			13, Tu, Th		
Philosophy	26	2	45	44a, 44b		27	1		46
Physics	A. 11a, M, W		A. 12, W, F A. 13b, W, F	A. 16a, M, W A. 20b, M, W			A. 2	A. 10, Tu, Th A. 14b, Tu, Th	A. 1. A. 17b, Tu, Th A. 21a, Tu, Th
Spanish			1				A		

TIME TABLE OF LABORATORY WORK

The numbers in parentheses indicate the hours; an asterisk indicates another section on Saturday, 9-12.

	Mon.	Tues.	Wed.	Thur.	Fri.
Bacteriology		10a (1-3) 12b (1-3)		10a (1-3) 12b (1-3)	
Biology	1 (2-4) 2 (2-4) 11 (2-4) 15a (2-4)	10 (2-4) 18 (2-4) 22a (2-4) 23b (2-4) 28 (2-4)	1 (2-4) 28 (2-4)	10 (2-4), 23b (2-4) 13b (2-4), 28 (2-4) 14a (1-5) 18 (2-4) 22a (2-4)	11 (2-4) 21 (2-4) 12a (2-4) 15a (2-4)
Chemistry	141b (1-4) 171a (1-4)	41 (1-4) *	2 (1-4) 21 (1-4) 45 (Sec. A, 1-4) 71 (1-4)	1 (1-3) 31 (1-2) 45 (Sec. B, 1-4) 111 hf. (1-4), 121 (1-4) *	101 (1-4) 133 hf. (1-4) * 31 (1-4)
Geology		14 (1-3) 13 (3-4)		19 (2-3)	
Mineralogy		1 (1-3) 41 (1-4) *	11 (1-4)	19 (2-3)	12 (1-3)
Physics	16a (2-4) 17b (2-4)	A.1 (Sec. A, 1-3 or 3-5) A.10 (3-5) A.11a (3-5) A.14b (3-5)	A.1 (Sec. B, 3-5) 20b (2-4) 21a (2-4)	A.2 (3-5) A.12 (3-5) A.13b (3-5)	

HISTORY OF THE UNIVERSITY

Queen's University owes its origin to the desire of the Synod of the Presbyterian Church in Canada, in connection with the Church of Scotland, for a ministry trained within the country. As early as 1832 the Provincial Government had been petitioned "to endow without delay an institution, or professorships, for the education and training of young men for the ministry in connection with the Synod." This and other representations failing of their object, steps were taken by the Synod to found a college at Kingston on the lines of the Scottish National Universities. On October 16, 1841, a Royal Charter was issued by Her Majesty Queen Victoria for the establishment of Queen's College, Kingston, and the first classes were opened in March, 1842, with the Rev. Dr. Liddell as Principal. Funds were provided in part by grants from the Presbyterian Church in Scotland and from the Canadian Government, and in part by liberal subscriptions from the friends of the young and growing University. In 1867-68, however, the withdrawal of the Provincial grant, and the failure of the Commercial Bank, almost brought financial disaster. But the crisis was met by the determination of Principal Snodgrass and of other self-denying workers, chief among whom was Professor Mackerras. The country was canvassed for subscriptions, and as a result of the widespread interest aroused, \$113,000 was added to the endowment.

In 1877 Principal Snodgrass was succeeded by the Rev. G. M. Grant, who for a quarter of a century built with brilliant success upon the foundation laid by his predecessors. Under him the University gained rapidly in size and prestige. By 1881 Queen's had a new building, an enlarged staff, and a great increase of students. In 1887, as the result of an effort in commemoration of the Queen's Jubilee, \$250,000 was raised, resulting in further extension, and in the establishment of new professorships.

Principal Grant died in 1902, and was succeeded in the following year by the Very Rev. D. M. Gordon. In 1916, owing to ill-health, Principal Gordon resigned his position, but continued in office until the autumn of 1917, when Rev. R. Bruce Taylor, M.A., D.D., LL.D., was appointed as his successor.

In 1854 the Medical Faculty of Queen's was established. It was re-organized in 1865 as the Royal College of Physicians and Surgeons in affiliation with the University, but in 1891 the original status was resumed. Excellent facilities for clinical work are provided in the

General Hospital, Hotel Dieu, Rockwood Hospital, and the Mowat Memorial Hospital.

Queen's led the way in co-education. As early as 1870 special classes in English and other subjects were formed for women, but Courses leading to a degree were not thrown open to them until 1878-79. In 1880 co-education was extended to the medical course, and in 1883 a separate Women's Medical College was opened and affiliated with Queen's. It was closed, however, in 1894, as similar facilities were offered in Toronto and elsewhere.

The School of Mining was founded in 1893 under an Ontario Charter. For several sessions all its departments were housed in Carruthers Science Hall, which had been erected in 1889, but in view of the rapid growth of the School the Provincial Legislature in 1900 provided for its accommodation two large buildings, Ontario Hall for the Departments of Physics, Geology and Mineralogy and Fleming Hall for the Departments of Civil, Mechanical and Electrical Engineering. More recently the Provincial Government erected Gordon Hall, which is entirely used for the teaching of Chemistry, and, through the generosity of Professor Nicol and other graduates, Nicol Hall has been built to provide class rooms and laboratories for the Department of Mining and Metallurgy. The School of Mining, which since 1893 had been under the control of a separate Board, was in 1916 amalgamated with the University, and now constitutes its Faculty of Applied Science.

In 1907 the Ontario Government established at Queen's a Faculty of Education for the purpose of providing professional training for teachers in the secondary schools of the Province. In 1920, however, the work of the Faculty was discontinued because of the decision of the Government to extend the scope of the Normal Schools and to create in Toronto the Ontario College for Teachers.

There is now on the University Campus a stately group of buildings, comprising the Old Arts Building (now the Theological Building); Carruthers Hall (Civil Engineering); Kingston Hall (New Arts), the gift of the city of Kingston; Grant Hall, erected by the students to the memory of the late Principal Grant; Ontario Hall (Physics, Geology, and Mineralogy); Fleming Hall (Mechanical and Electrical Engineering); Gordon Hall (Chemistry); Nicol Hall (Metallurgy); the Medical Building; the Medical Laboratories Building; the Gymnasium; and the Observatory. The Library, which contains about 95,000 volumes, is in the Old Arts Building. The late Chancellor of the University, Dr. James Douglas, donated \$150,000 for a separate Library Building, and as the Ontario Government is providing an equal sum, a handsome new structure will be erected in the course of the present year.

Queen's University, though founded by a Church, was dedicated to the nation. As its constituency expanded, its constitution was gradually broadened, until finally in 1912, as the result of an amicable arrangement between the Presbyterian Church and the Trustees of the University, an act was passed by the Dominion Parliament removing the last vestige of denominational control.

The endowment of the University at present amounts to \$1,791,495, of which about \$900,000 was obtained in 1918-19. To this sum the late Chancellor Dr. Douglas contributed \$500,000 and the Carnegie Corporation \$250,000. In recent years the Province of Ontario has steadily increased its grants, and the annual income of the University, derived from all sources, is now almost \$500,000. The registration of students has grown from 665 in 1900 to 2430 in the present session, and Queen's has become nation-wide in its work and influence.

GOVERNMENT AND ADMINISTRATION

The administration of the University is vested in the Board of Trustees, the University Council, the Senate, and the Faculty Boards.

THE BOARD OF TRUSTEES

The Board of Trustees consists of the Chancellor, the Principal, and the Rector; one representative from each affiliated college; representatives as provided for by the Statutes from the University Council, the Benefactors, the Graduates; and members elected by the Board of Trustees.

The functions of the Board of Trustees are to manage the finances, to possess and care for the property, to procure legislation, to appoint instructors and other officers, and in general to attend to such external matters as do not relate directly to instruction.

THE UNIVERSITY COUNCIL

The University Council consists of the Chancellor, the Trustees, the members of the Senate, and an equal number of members elected by the Graduates from their own numbers.

The functions of the Council are:

- (1) To elect the Chancellor, except when two or more candidates are nominated, in which case the election is by registered graduates.
- (2) To elect six trustees, two of whom shall retire annually.
- (3) To make by-laws governing the election of the Rector by the registered students, of four trustees by the benefactors, of six trustees by the University Council, and of six trustees by the graduates.
- (4) To discuss all questions relating to the University and its welfare.
- (5) To make representation of its views to the Senate or the Board of Trustees.
- (6) To decide on proposals for affiliation.
- (7) To arrange all matters pertaining to (a) its own meetings and business, (b) the meetings and proceedings of Convocation, (c) the installation of the Chancellor, (d) the fees for memberships, registration and voting.

THE SENATE

The Senate consists of:

The Principal.

The Vice-Principal.

The Principal of Queen's Theological College.

The Dean of the Faculty of Arts.

The Dean of the Faculty of Medicine.

The Dean of the Faculty of Applied Science.

Three Professors elected by the Faculty of Arts.

Three Professors elected by the Faculty of Applied Science.

Three Professors elected by the Faculty of Medicine.

Two Professors elected by the Faculty of Queen's Theological College.

The Functions of the Senate are:

(1) To determine all matters of an academic character which concern the University as a whole.

(2) To consider and determine all courses of study leading to a degree, including conditions of Matriculation, on recommendation of the respective Faculty Boards; but the Senate shall not embody any changes without having previously presented these to the Faculty.

(3) To recommend to the Board of Trustees the establishment of any additional Faculty, Department, Chair, or Course of Instruction in the University.

(4) To be the medium of communication between the Alma Mater Society and the Governing Bodies.

(5) To determine all regulations regarding the social functions of the students within the University, and regarding the University Library and University Reading Rooms.

(6) To publish the University Calendars.

(7) To conduct Examinations.

(8) To grant Degrees.

(9) To award University Scholarships, Medals, and Prizes.

(10) To enforce the Statutes, Rules, and Ordinances of the University.

(11) And generally, to make such recommendations to the Governing Boards as may be deemed expedient for promoting the interests of the University.

THE FACULTY BOARDS

The Faculty Boards are constituted as follows:

For the Faculty of Arts and for the Faculty of Applied Science, the Dean, Professors, Associate Professors, Assistant Professors, and Lecturers of each Faculty have power to meet as separate boards, and to administer the affairs of each Faculty under such regulations as the Board of Trustees may prescribe.

For the Faculty of Medicine, the Dean, Professors, Associate Professors, and Assistant Professors have power to meet as a separate board, and to administer the affairs of the Faculty under such regulations as the Board of Trustees may prescribe.

The Principal is *ex-officio* president and a member of each of the Faculty Boards. In his absence from the Arts Faculty, the Vice-Principal shall preside. In his absence from the Medical Faculty, or from the Faculty of Applied Science, the Dean of the Faculty shall preside.

The Functions of the Faculty Boards are:

- (1) To recommend to the Senate courses of study leading to a degree, and the conditions of admission.
- (2) To decide upon applications for admission or for change of course, subject to the regulations of the Senate.
- (3) To submit to the Senate names for both ordinary and honorary degrees.
- (4) To arrange the time-table for classes and to edit the Faculty Calendar, subject to the approval of the Senate.
- (5) To control registration, and determine the amount of fees and manner of payment, subject to the regulations of the Senate.
- (6) To deal with class failures.
- (7) To exercise academic supervision over students.
- (8) To make such recommendations to the Senate as may be deemed expedient for promoting the efficiency of the University.
- (9) To award Faculty Scholarships, Medals, and Prizes.
- (10) To appoint such sessional assistants, fellows, tutors, and demonstrators as shall be needed to give instruction in the subjects taught by the Faculty.
- (11) To pass such regulations and by-laws as may be necessary for the exercise of the functions of the Faculty.

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Retire 1926

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¹Elected by the University Council.²Elected by the Benefactors.³Elected by the Graduates.⁴Appointed to represent the Faculty of Applied Science.⁵Elected by the Faculty of Queen's Theological College.⁶Elected by the Board of Trustees from among its own members.

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- W. M. CONACHER, B.A. (London),
Assistant Professor of French.

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Assistant Professor of English History,
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Assistant Professor of Political and Economic Science,
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Assistant Professor of Political Science,
 310 University Avenue.
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Assistant Professor of Biology,
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 117 Bagot Street.
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 136 Bagot Street.
- HORACE M. REYNOLDS, B.A.,
Lecturer in English,
 245 Brock Street.

III.—OTHER INSTRUCTORS

- WILHELMINA GORDON, M.A. (Queen's),
Instructor in English,
 122 University Avenue.
- MRS. ETTA NEWLANDS, M.A. (Queen's),
Instructor in Mathematics,
 25 Concession Road.
- MARY L. MACDONNELL, M.A.,
Instructor in Classics,
 University Avenue
- J. BEWS,
Physical Instructor for Men,
 220 Colborne Street.

- H. C. WHITE, B.A.,
Demonstrator in Biology,
 Queen's University.
 28 Wellington Street.
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Physical Instructor for Women,
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 228 Nelson Street.
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Fellow in Philosophy,
 Queen's University.
- W. T. MCCREE, M.A.,
Fellow in Hebrew.

TUTORS

- Tutors in English:* Helen de Renzy, Annie Robinson, B.A., B. C. Diltz,
 R. H. Wallace, Norman Campbell.
- Tutor in French:* Marion Laird.
- Tutor in Spanish:* Mildred Hallett, B.A.
- Tutors in Mathematics:* L. F. Smith, F. R. Bamforth, B.A., W. MacMillan, J. T. McNeely, R. C. Brogden, E. Stephens.
- Tutors in Physics:* G. W. Hudson, B.Sc., W. C. Parnell, B.Sc.
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EQUIPMENT AND SPECIAL FACILITIES

THE LIBRARY

The University Library, which has about 95,000 volumes and many thousand pamphlets, contains one of the best collections of books in Canada. The Canadian section has many rare and valuable historical documents, and is particularly well equipped for research studies.

The Library is open daily, except Sundays, from 9 a.m. to 4.30 p.m. The Reading Rooms are open from 9 a.m. to 6 p.m. and from 7.30 p.m. to 9.30 p.m. Intra-mural students may ordinarily have as many as three books out at one time but may not keep them longer than one week without a new entry.

THE MUSEUMS

The Biological and Ethnological Museum has a large Botanical collection illustrating fully the flora of North America, Europe, Asia, South Africa, and Australia; a Zoological collection representing the Canadian fauna by a large number of prepared specimens of mammals, birds, reptiles, fishes, insects, and mollusca; and an Ethnological collection of weapons, utensils, dresses, and ornaments.

The Geological and Mineralogical Museum, which is situated on the ground floor of Ontario Hall, has a large collection of minerals, ores, rocks, and fossils, arranged to illustrate most of the subjects treated in the lectures.

THE LABORATORIES

The Zoological laboratories occupy three rooms in the Medical Laboratories Building, and are well provided with material for dissection and with microscopes and other instruments.

The Botanical laboratories likewise occupy three rooms and are fully equipped with specimens and with modern apparatus.

The Chemical laboratories are in Gordon Hall. On the third floor are two laboratories for General Chemistry, one for Medical Chemistry, and one for Electro-Analysis. On the second floor are two for Quantitative Analysis, one for Organic Chemistry, one for Food and Water Analysis, and one (not yet equipped) for whatever future development demands. On the first floor are three for Qualitative Analysis, one for Industrial Chemistry, one for Physical Chemistry, one for Gas Analysis, one for Spectroscopy, and one dark room for Photography. Besides these there are small separate laboratories for research work.

The Physical laboratories are in the southern half of Ontario Hall. Two of the large rooms on the first floor are devoted to the more elementary laboratory work of the first and second years and a commodious

room on the second floor is arranged as an electrical laboratory for advanced work. Various smaller rooms are fitted for special purposes. One of them is for work in Physical Optics—Spectrometry, Polarimetry, and Spectroscopy. Another is well equipped as a dark room for Photography. A third is arranged for X-ray and photometric work. Other rooms are used as private laboratories.

THE OBSERVATORY

The Observatory has a transit room, a computing room, and an equatorial room with revolving dome. The equatorial telescope has a six-inch objective, declination and right ascension circles, and a driving clock. The transit has a three and a half inch objective. The further equipment consists chiefly of a striding level, a chronograph, a mean time clock, and a sidereal time clock.

FACILITIES FOR FIELD WORK

Geology and Mineralogy. In the vicinity of Kingston a greater variety of economic minerals and metalliferous ores is mined than in any similar area in Canada. Through the kindness of the managers the various mines may be visited by the Geology and Mineralogy classes, and students may thus obtain valuable information concerning field conditions.

Botany. The great diversity of land surface in the vicinity of Kingston enables the students of Botany readily to make field studies of the various plant associations. Within two miles of the city limits are extensive reed marshes, bordered by water gardens well stocked with the swimming and submerged societies of plants. A drive of eight miles permits the study of an excellent example of sphagnum moor, with all the plants of our latitude characteristic of muskeg conditions. An hour's drive in another direction reaches a region of high, dry, granite hills where xerophytic modifications dominate the flora. A carefully preserved mesophytic meadow with a forest plantation is within walking distance of the University.

FACILITIES FOR ATHLETICS

The University provides ample facilities for athletics. An excellent gymnasium, equipped with shower-baths, large swimming pool, running track, and all apparatus for physical training, stands in the University grounds. Beside the gymnasium is a large covered skating rink. A block from the University is the football field, with a Stadium given by Mr. James Richardson in memory of his brother, Captain George Richardson, a Queen's graduate and a former athlete, who was killed in the Great War. There is room and equipment for all students who wish to take part in football, hockey, basketball, tennis, track athletics, swimming, boxing, fencing, or wrestling.

GENERAL INFORMATION

DEGREES

By the Royal Charter granted to Queen's College, it is "willed, ordained, and granted that the said College shall be deemed and taken to be an University, and that the students in the said College shall have liberty and faculty of taking the degree of Bachelor, Master, and Doctor in the several Arts and Faculties."

The degrees at present conferred under the statutes of the University are as follows:

I.—HONORARY DEGREES

Doctor of Divinity, D.D.; Doctor of Laws, LL.D.

II.—DEGREES BY EXAMINATION

1.—In Arts

Bachelor of Arts, B.A.; Master of Arts, M.A.; Doctor of Philosophy, Ph.D.

2.—In Theology

Bachelor of Divinity, B.D.

3.—In Medicine

Doctor of Medicine, M.D.; Master of Surgery, C.M.; Doctor of Public Health, D.P.H.; Doctor of Science, D.Sc.

4.—In Science

Bachelor of Science, B.Sc.; Master of Science, M.Sc.

HOODS

Each Degree has its distinctive hood, as follows:

B.A.—Black, bordered with red silk.

M.A.—Scarlet.

B.D.—White, bordered with crimson plush.

M.D. and C.M.—Scarlet, bordered with white.

B.Sc.—Black silk, bordered with yellow (old gold) silk.

D.D.—Black silk, lined with white silk.

M.Sc.—Black silk, lined with yellow, bordered with yellow.

D.Sc.—Yellow silk, bordered with black.

LL.D.—Black silk, lined with blue silk.

Ph.D.—Black silk, lined with purple, bordered with white.

RELATION TO OTHER INSTITUTIONS

The Ontario Department of Education

The Department of Education accepts certain Courses in Arts as the academic qualification for High School Assistants, for Specialists, and for Inspectors.

English Universities

OXFORD.—Queen's University is admitted to the privileges of the *Colonial Universities' Statute*. These privileges are: (1) A student who has taken two full years' work at Queen's, including Greek 2, will be admitted as a *Junior Student*, i.e. he will be excused from the University Matriculation examination known as *Responsions*. (2) A student who has taken at least three years' work at Queen's, including Greek 2, and (a) has taken First or Second Class Honour standing in at least two of the subjects presented for the Degree of Bachelor of Arts, and (b) has taken Pass standing in not less than seven Pass courses, will be admitted as a *Senior Student*, i.e. he will be excused from the University examinations known as *Moderations*. Such a student may reckon the term in which he matriculates as his fifth term, and he may take his B.A. degree after a residence of eight terms instead of twelve, as ordinarily required, provided he passes the prescribed examinations.

CAMBRIDGE.—Graduates in Arts, provided they have passed one or more examinations after matriculation in (a) Latin; (b) either Greek, French, or German; (c) Mathematics, are entitled to the benefit of the statute in regard to affiliated institutions, viz.—(1) to be exempted from all parts of the *Previous Examination*, (2) to count the first term of attendance as the fourth of residence.

LONDON.—Queen's University is recognized under Statute 116 of the University of London. Graduates of Queen's are therefore admitted to the courses leading to a degree at the University of London without passing the Matriculation of that University.

EXTENSION LECTURES

Members of the staff are prepared to lecture at outside points on a great variety of subjects. The lectures are specially suitable for University extension work, for courses of study planned by various organizations, and for teachers' conventions. A complete programme of lectures and full information on any point connected with them will be supplied upon application to the Registrar, Queen's University.

DEAN OF WOMEN

The Dean of Women, Mrs. W. E. McNeill, M.A., will assist the women students in planning their courses, give them information and help of other kinds, and advise them in all matters in which they may feel the need of counsel.

Mrs. McNeill may always be reached by correspondence addressed to her at the University. During the session she may be consulted at her office in Kingston Hall.

EXPENSES

At the present time the average student pays for table board from \$5.50 to \$6.50 a week, and for room from \$2.50 to \$3.50 a week.

There is now a cafeteria on the University grounds at which meals can be obtained for \$5.50 a week.

For University fees see pages 45 and 46.

BOARDING HOUSES

Lists of Boarding Houses for men students may be obtained from the Registrar.

Women students are not permitted to lodge in houses in which men are lodging. A list of approved houses where suitable accommodation is provided for women students will be furnished on application to the Dean of Women, Mrs. McNeill.

Two women's residences, known as "The Avonmore" and "The Earl Street Residence," capable of accommodating a limited number of students are established in connection with the University. Persons desiring information should communicate with the Dean of Women regarding the former and with the Registrar regarding the latter.

PHYSICAL WELFARE OF STUDENTS

Every student is required upon registration to contribute \$3 towards a health insurance fund which the University will use to provide medical care for those who are ill.

All students in their first year are required to take physical training for two hours a week. They are examined by the University physician, who prescribes proper exercises to correct physical defects.

Women students are asked to bring high white running shoes, black bloomers, white middie blouse with white collar, and black middie tie.

ATTENDANCE AT CHURCH

All students are expected to attend a church of the denomination to which they belong.

During the session, Sunday services are conducted in the University by representatives of different denominations who are invited to preach to the students, professors, and visitors.

STUDENT SELF-GOVERNMENT

Queen's was the first University in Canada to introduce student self-government. All students are members of the Alma Mater Society, the chief instrument of student government, and are expected to share in its duties and responsibilities.

REGISTRATION

All students are required at the beginning of each session to have their names entered upon the University Register.

Intra-mural students must register *in person*, paying full fees for the session. Those registering during the first three days of the session will be charged the regular fees; but those registering at a later date will be charged an extra fee of \$3.

Intra-mural students are not allowed to register after October 6 unless at some time before this date they have obtained permission from the Faculty to register later.

Regulations for extra-mural students will be found on pages 36-44.

ADMISSION TO THE FACULTY OF ARTS

1. Candidates desiring to enter the Faculty of Arts should make application for admission on forms supplied by the Registrar.

2. The application should be accompanied by matriculation or other certificates. These will be returned when the candidate's standing is determined.

I.—ADMISSION BY MATRICULATION

3. Matriculation examinations are conducted for the Universities of Ontario by the University Matriculation Board. Details regarding these examinations may be found in a separate publication entitled **REQUIREMENTS FOR MATRICULATION**. This also contains a list of the Matriculation Scholarships and the conditions of award.

4. The Matriculation examination is of two grades called *Pass* and *Honour* Matriculation.

A. Pass Matriculation

5. The subjects of Pass Matriculation are as follows: *Latin, English, History, Mathematics*, and any two of the following: *Greek, German, French, Spanish or Italian, Experimental Science* (Physics and Chemistry) or *Agriculture*.

6. The pass standard is fifty per cent. on each paper.

7. A student who presents a certificate of Pass Matriculation will be admitted to the first year's work in Arts in the session of 1922-1923 and may expect to graduate in four years.

In 1923 and thereafter it will be necessary in addition to Pass Matriculation to obtain the following standing:

(a) Fifty per cent. at the Honour Matriculation examinations in two of *English, Latin, French, Mathematics, Greek or German or Spanish, Experimental Science* (Physics and Chemistry) or *Biology* (Zoology and Botany),

or,

(b) Seventy-five per cent. at the Pass Matriculation examination in each of any four of the twelve papers required, or sixty-six per cent. in each of any six of the twelve.

B. Honour Matriculation

8. The subjects of Honour Matriculation are as follows: *Latin, English, Modern History, Mathematics, Greek, German, French, Spanish, Physics, Chemistry, Biology* (Zoology and Botany).

9. A candidate who enters with Honour Matriculation credits will on payment of the *pro tanto* fee be allowed first year work in all subjects up to five in which he has made fifty per cent. in each paper; but only a *pro tanto* allowance will be made in Physics, Chemistry, and Biology to students proceeding to course 2 in these subjects. In such cases the Departments concerned will grant exemption from all or part of Physics 1, Chemistry 1, or Biology 1 on presentation of evidence regarding the work covered.

This regulation will be modified in 1923 when the new Matriculation standards come into effect.

10. A candidate entering in 1922 with Honour Matriculation in four or more subjects may expect to graduate in three years, if he is on a Pass Course.

II.—ADMISSION BY EQUIVALENT EXAMINATION

A.—Examinations Equivalent to Pass Matriculation

11. Candidates who produce certificates of Matriculation into any university in the British Empire, will be allowed to enter the Faculty of Arts without further examination. Matriculation standing from universities in other countries than the British Empire will be accepted *pro tanto*.

12. The following certificates are accepted for Pass Matriculation in the subjects which they cover, but in no case will they admit to the University unless at least one foreign language is included:

Alberta	Grade XI.
British Columbia	Intermediate.
Manitoba	Second Class.
New Brunswick	First Class License.
Newfoundland	Associate (Junior).
Nova Scotia	Grade XI (average 60, minimum 50).
Ontario	Entrance to Normal School.
Prince Edward Island	Honour Diploma or First Class License on Second Year Certificate from Prince of Wales College.
	{ The University School Leaving.
Quebec	{ Model School Diploma under certain conditions.
Saskatchewan	Second Class.

13. A candidate who has not passed the matriculation examination in Latin, or in Greek, German, or French, must as a general rule attend the Preparatory course in such language for one session and pass the University or equivalent matriculation examination before being admitted to the regular first year course in that subject. Those, however, whose previous work in a particular language has almost reached the matriculation standard may transfer from course A to course 1 after the mid-year examination, if their instructors think them capable of proceeding with first year work. But no student shall be permitted to count a Preparatory course towards a degree if he receives credit for it under these conditions.

B. Examinations Equivalent to Honour Matriculation

14. Candidates may obtain *pro tanto* Honour Matriculation standing if they hold teachers' *certificates, or the non-professional standing for such certificates, of the grades indicated below:

Alberta	Grade XII.
British Columbia	Senior Grade.
Manitoba	First Class.
New Brunswick	First Class.
Newfoundland	Associate Grade.
Nova Scotia	Grade XII (50% required).
Ontario	Entrance to Faculty of Education.
Prince Edward Island	Honour Diploma of Third Year, Prince of Wales College.
Saskatchewan	First Class.

III.—ADMISSION BY SPECIAL REGULATION

15. In the case of students who present certificates showing that they are over the age of twenty-one, the Senate may postpone the Matriculation examination. Except by special permission of the Senate and upon recommendation of the Medical or Science Faculty, such un-matriculated students will not be admitted to the first year in Arts for the purpose of proceeding to a course in Medicine or Science.

16. Those entering the Faculty of Arts under this regulation without having matriculated in Latin, or in Greek, German, or French are subject to the regulation in section 13.

*Candidates holding certificates from the Department of Education of Ontario should send their certificates to the Registrar, Queen's University, in order to have standing allowed. Candidates holding certificates from Departments of Education outside of Ontario should write to the Departments concerned asking that their marks be sent to the Registrar, who will then advise regarding the standing allowed.

REGULATIONS REGARDING EXTRA-MURAL WORK

All enquiries regarding regulations should be addressed to the Registrar.

In order to meet the needs of students who are unable to do all their work in residence, of teachers in actual service who wish to improve their professional qualifications in certain subjects, and of those persons in general who, though unable to attend the regular classes, are yet desirous of pursuing particular studies under competent direction, the University conducts a system of extra-mural instruction. This work is as nearly as possible identical with that taken up by the intra-mural students and the same examinations are set for all. Candidates who fulfil at least the minimum requirements of residence and otherwise comply with the conditions stated below may qualify for the various degrees to which their Courses lead; while those who finish a three years' Course, covering three-fourths of the classes required for a degree, are entitled, on the payment of a fee of \$5, to a University Diploma.

Conditions of Admission to Extra-mural Work

1. In order to register for the first time extra-mural students must be residents of Canada. Students residing outside of Canada, however, who have attended the University for one session or who have taken work extra-murally for one session are allowed to complete their Course.

2. Candidates for a degree, unless twenty-one years of age, must pass the Matriculation examination or its equivalent before they can register as extra-mural students.

A student over twenty-one years of age who is not a candidate for a degree or diploma may register without matriculation standing in any course in which he desires to improve his scholarship, provided that he can satisfy the Committee on Studies of his ability to proceed with the work desired.

3. No one is permitted to take work at Queen's in the same year as he is taking work at any other educational institution or writing on any outside examination other than Pass Matriculation.

4. An intra-mural student may become an extra-mural student only by special permission of the Faculty. A student registered intra-murally in the winter session will not be allowed to continue his course extra-murally in the following summer, unless by special permission he has

been allowed to postpone one or two courses until the summer. In such case, however, he must attend the Summer School. But any student may, in preparation for the September Supplemental examinations, register for instruction in Pass courses in which he failed in the sessional examinations of the previous January or April, if they are offered extra-murally in the summer.

Registration in Extra-mural Courses

5. Applications for registration must be made on forms supplied by the Registrar, and must satisfy the conditions stated in section 6. They must reach the University by the dates mentioned in section 7; and they must be accompanied by the fees specified in section 8.

6. (a) An extra-mural student may not register for more than four courses in the academic year. He may register in the winter (October-April) for as many as two courses or four half-courses and in the summer* (May-September) for two courses or three half-courses. A student, however, who has taken only one course in the winter and attends the Summer School, may under special circumstances be permitted by the Committee on Studies to take three courses in the summer.

(b) The courses selected in each year are subject to the approval of the Committee on Studies and, in the case of candidates for degrees, must conform to the regulations for concentration, distribution, and sequence of work (see page 59 ff.).

(c) Only such courses may be taken as the various departments offer to extra-mural students. The number of such courses varies with the department and is much greater in the winter than in the summer. Students in Physics, Chemistry and Biology must do the laboratory work in these subjects intra-murally either at the Summer School or in the regular University session.

(d) Courses 1 and 2 in any subject except History, Economics, and Philosophy must be taken in different academic years.

(e) Before registering a student must consult the time-table on pages 8 and 9, as he must not register in two classes which meet at the same hour.

7. (a) Extra-mural students should register two or three weeks before October 1 or May 1 in order that they may receive the preliminary instructions and provide themselves with books in time to start work promptly at the beginning of the month. They will be allowed to register

*The Calendar is issued in the spring but is not in force until the following autumn. Summer work, therefore, is based on the Calendar of the preceding winter.

up to September 20 for the winter or April 24 for the summer at the regular fee, and up to September 29 or May 1 on payment of an extra fee of \$3. Only under exceptional circumstances and by special permission of the Faculty will registration be accepted after these dates.

(b) Extra-mural students living so far from the University that they cannot receive the examination returns before the last date of registration should send fees to the Registrar within the required dates, stating the classes in which they wish to register if successful in their examinations. Necessary changes may be made later.

8. The fees payable upon application for registration are as follows:

(a) *Registration.* A registration fee of \$10 must be paid once in each year (October 1-September 30) and an extra fee of \$3 for late registration as provided in section 7 (a).

If a student registers in the autumn he has the opportunity of taking courses in the winter and in the following summer on one registration fee; if he registers in the spring his fee will cover summer work only.

A student may register in the autumn for all the courses he intends taking in the academic year or he may register only in those which he intends to complete in the winter, leaving the rest to be added in April.

(b) *Tutorial.* The tutorial fee is \$10 for each course and \$5 for each half-course (the latter are indicated in departmental prescriptions by the letter *a* or *b** after the number). If the required amount of work in a course is not completed in the session, winter or summer, in which it is begun, the tutorial fee must be paid again.

(c) *Pro Tanto.* A student desiring to have courses credited on work done elsewhere must pay a *pro tanto* fee of \$10 at the time of his first registration.

Minimum Residence Requirements

The University does not undertake to make it possible for a student to get a degree if he merely satisfies the minimum residence requirements given below, since in some subjects only a limited amount of instruction can be given extra-murally or in the Summer School. In the Sciences, for example, all the laboratory work must be done at the University and a student specializing in these subjects may find it necessary to spend two or three years in residence. The various departmental prescriptions (see pages 70 ff.) indicate the parts of the work offered extra-murally.

*Outlines in half-courses of the second term are not sent out till January.

Candidates should examine these prescriptions in connection with the Regulations for Concentration on page 61.

9. Except as provided in the next paragraph, candidates for a degree must attend at least one full winter session or at least four full sessions of the Summer School (taking work in at least four different departments), and they must pass examinations following each session's work.

The Faculty of Arts may under special circumstances accept attendance for one or two sessions at another institution in lieu of one or two sessions of the Summer School periods at this University.

10. Candidates for Specialists' and Inspectors' certificates must attend at least two full sessions or, under the direction of the University, one full session and at least two sessions of the Summer School.

Manner of Conducting Extra-mural Classes

(See also section 22)

11. The method of giving extra-mural instruction necessarily varies with the subject. Detailed information is contained in the instruction sheets provided from time to time. These specify the prescribed reading, assign exercises and essays to be written, and in some cases give the substance of intra-mural lectures. The first instalment of work is sent to the student as soon as he registers. The date of each essay or exercise coming in and of each criticism or fresh piece of work going out is recorded at the Registrar's Office. Each essay or exercise is promptly examined and returned to the writer with criticisms and suggestions.

12. Students should address their work and all inquiries regarding their work to The Tutor in (Whatever the subject may be), Queen's University, Kingston, Ontario. In no case should the name of the tutor be used.

Transference from Extra-mural to Intra-mural Classes

13. Extra-mural students may become intra-mural students during the winter session at any time after December 1, in those courses in which they have satisfactorily completed the work prescribed up to the date of their transferring. Fees already paid will be applied on intra-mural charges, and the balance alone will be required.

14. Students who transfer to intra-mural work before January 18th may add enough "b" half-courses to give them five classes in the second term, if such half-courses are available and the pre-requisite work has been done.

Library Facilities for Extra-mural Students

15. With the exception of text-books prescribed in the Calendar, which all students must provide for themselves, and of dictionaries, encyclopædias, and other volumes not usually lent, extra-mural students may borrow from the University Library any books required in their work.

16. Three books may be borrowed at one time, provided that no two relate to the same piece of work. Unless a special arrangement is made, a book may be kept only two weeks from the date on which it is received.

17. Special arrangements are made for supplying the necessary books to extra-mural students in the Ph.D. Courses.

18. Extra-mural students must send to the Librarian a deposit of \$2 for the use of one book at a time, \$4 for two books, and \$5 for three. Books may be exchanged as often as the borrower wishes; and when all are returned, the deposit, less the amount spent for postage, will be repaid on request. No fee is charged for the use of the Library.

19. All communications concerning books and deposits must be addressed to The Librarian, Queen's University, Kingston, Ontario.

Regulations regarding Examinations

20. Examinations are held in January, April, and September, as follows:—

(a) Examinations in all half-courses of the first term are held about the second week of January. These examinations are final and may not be postponed till April or September.

(b) Examinations in all whole courses and in half-courses of the second term are held at the end of April. Examinations in Pass courses may be postponed till the autumn, but such postponement will lessen the amount of new work which may be completed in September.

(c) Examinations in Pass courses and in all work offered in the summer are held in September. Ordinarily an extra-mural student may not write in September on more than two courses or three half-courses. He may write on three courses, however, if examinations in one or more have been postponed from April or if under regulation 6(a) he has been allowed to take three courses in the summer.

21. Applications for examination in the particular subjects upon which a student proposes to write, accompanied by the proper fees, must reach the Registrar's office by December 1 for the January examinations,

by March 1 for the April examinations, and by August 1 for the September examinations. The fees are \$3.00 for each half-course examination and \$6.00 for each whole course examination, with an additional charge of \$3.00 for late application, if accepted.

22. No student is admitted to examination in any subject unless he has sent in at the dates specified all the essays and at least eighty per cent. of the required exercises. The last of the written work should reach the University at least two weeks before examinations begin.

23. If a student who has completed the required work in a given subject wishes in some subsequent academic year merely to take the examination, he must pay the registration fee of \$10.00 as well as the examination fee specified in Section 21. If in the meantime, however, the course has been discontinued or radically changed the University will not undertake to provide a special examination.

24. Extra-mural students in any of the modern languages will be required to take an hour a week of oral work with one of the regular classes during their intra-mural residence, and pass an examination on such work. Students attending the Summer School will be given an opportunity of completing this oral work in the languages offered in the Summer School.

25. Candidates for Honours in German or French must satisfy the Department concerned as to their oral qualifications. When an examination is necessary it must be taken at the University.

26. Practical examinations in Science must be taken at the University.

27. Examination centres have been established at most of the larger cities and towns throughout Canada and a list of such centres is sent to all extra-mural students several months in advance of the examinations. Those wishing to have new examination centres established must make application, accompanied by the special fee of \$10, by December 1 for January examinations, by February 15 for April examinations, and by July 15 for September examinations.

Determination of Standing

28. Sections 23 and 24 of GENERAL REGULATIONS, page 57, apply also to extra-mural students.

Fees for Extra-mural Students

29. A full statement regarding fees may be found under FEES.

30. Extra-mural students who enter as intra-mural students during the winter session will have their extra-mural fees applied on intra-mural charges and need then pay only the balance. (See section 13.)

31. In no case whatever will refunds be made. In case of sickness, however, but under no other conditions, an application to have fees *carried over* will be considered if it is made within one month of registration and is accompanied by a doctor's certificate.

32. Cheques or drafts on any branch of the Bank of Montreal will be received at par. In other cases 15 cents per \$100 should be added to cover bank charges. Remittances should be made by Post Office or Express Order, by cheque, or registered letter.

THE SUMMER SCHOOL

The thirteenth session of the Summer School begins on Monday, July 3, 1922, and closes on Friday, August 11.

Courses will be given in Latin, German, French, Spanish, English, History, Economics, Mathematics, Physics, Chemistry, Biology, Mineralogy and Geology. By reason of daily lectures and almost individual instruction, it is possible to cover about half of the work done in the corresponding courses of the winter session.

The libraries and various laboratories are available for use as in the winter session.

Purpose of the Summer School

The Summer School offers University advantages to those who cannot attend the classes of the regular session.

It gives **TEACHERS** an opportunity to improve their scholarship in particular lines of study, to observe methods of teaching, and to become acquainted with books and equipment not ordinarily available.

It gives **INTRA-MURAL** students who have lost standing through illness or other causes an opportunity of qualifying for the September Supplemental examinations. Moreover, intra-mural students in their first or second years, who are unable to carry the required five courses, may, with the consent of the Committee on Studies, take three or four courses in the winter and the rest extra-murally in the summer, provided that they attend the Summer School.

It gives **EXTRA-MURAL** students an opportunity to take the oral work required in the modern languages, to do in the laboratories the practical work required in the Science courses, and to satisfy by attendance at four sessions the minimum residence requirements for the degree of B.A. (See sections 9 and 10 under **REGULATIONS REGARDING EXTRA-MURAL WORK**). Two sessions of the Summer School are accepted by the Department of Education as equivalent to one of the two winter sessions required for Inspectors' and Specialists' Certificates.

Admission

No examination is required for admission to the Summer School. The classes are open to all who desire to improve their scholarship or professional equipment. Candidates for a degree, however, must satisfy matriculation requirements before being admitted to the University examinations.

Summer School students who are candidates for a degree must register in April as extra-mural students under the usual regulations, except as provided below:

(a) Those who are merely repeating the work of the preceding regular winter session may register for the Summer School only.

(b) With the consent of the Committee on Studies a Summer School student who has never before registered at the University may be permitted to prepare for the September examinations in a limited amount of work, but he must register as an extra-mural student and write at least eighty per cent. of the exercises not covered at the Summer School.

No student working for credit is allowed to register for more than two courses or three half courses in the Summer School unless he has special permission from the Committee on Studies.

Examinations

No examinations are held in connection with the Summer School. Students desiring credit for their work should write at the regular University examinations in September. See section 20 under REGULATIONS REGARDING EXTRA-MURAL WORK.

Further Information

The Announcement of the Summer School, containing full details, concerning the work offered is published each year about April 1, and is supplied on application.

All inquiries concerning the Summer School should be addressed to The Registrar, Queen's University, Kingston, Ontario.

FEES

Cheques tendered in payment of fees should be certified by the banks upon which they are drawn.

INTRA-MURAL

The fees specified under the first three heads are payable each year upon registration.

Tuition (including class fees, registration, and January and April examinations\$54 00

Laboratory (for those taking courses in Science)—

Fees:

Each whole course	5 00
Each half course	3 00

Deposit:

Without Chemistry	5 00
With one course in Chemistry	10 00
With two or more courses in Chemistry.....	20 00

Student interests:

Men	14 00
Women	13 00
(Health Insurance, \$3; Athletics, \$5; special fee for Athletics for 1922-23, \$3; Arts Society, \$3; Levana Society, \$2.)	

The fees specified below are payable as they are incurred.

Special Charges:

Pro tanto allowance of courses	10 00
Late registration	3 00
Change of courses after registration	2 00
Preparatory courses in French and Latin, each	5 00
Late application—for examination or graduation.....	3 00
Writing examinations at outside centres	5 00
Supplemental examination	10 00
Fees for special students not paying full fees:	
Registration	10 00
Tuition: each course	12 00
Examination, January, April, or September	10 00
(Student interests and Laboratory charges as above)	

Certificates:

Matriculation Certificate	5 00
Certificate of Standing	1 00
Diploma for three years' work	5 00

Graduation:

Bachelor of Arts (in Course)	10 00
Bachelor of Arts <i>ad eundem gradum</i>	20 00
Master of Arts	20 00
Doctor of Philosophy	50 00
Doctor of Science	50 00
Extra Fee for degree <i>in absentia</i>	10 00

EXTRA-MURAL

The fees specified under the first two heads are payable upon registration; the examination fees are payable at the dates given in section 21,
REGULATIONS REGARDING EXTRA-MURAL WORK.

Registration:

Regular fee (covering October-September)	\$10 00
Late registration	3 00
Change of work after registration	2 00
Pro tanto allowance of courses	10 00

Tutorial:

Each course	10 00
Each half-course	5 00

Examination:

Each whole course, April or September	6 00
Each half-course, January, April, or September.....	3 00
Establishing new centre.....	10 00
Late application	3 00

Graduation and other Certificates:

The same fees are charged as in the case of intra-mural students.

SUMMER SCHOOL

Extra-mural students who register in April are allowed a rebate on the full Summer School tuition of half the tutorial fees previously paid.

Full Summer School attendance	\$25 00
Three weeks' attendance	15 00

Laboratory deposit as required of other intra-mural students.

SCHOLARSHIPS, PRIZES, AND MEDALS

I—MATRICULATION SCHOLARSHIPS

For a list of Matriculation Scholarships and the conditions of award see the publication entitled REQUIREMENTS FOR MATRICULATION.

II.—SCHOLARSHIPS IN ARTS

New York Queen's Alumni Scholarship in Biology

Value \$50. Given by the New York Queen's University Society and awarded to the student in Arts or Medicine who obtains the highest number of marks in the Honour examinations in Physiology and Histology.

The Andrew Haydon Scholarship in Colonial History

Value \$50. Founded by Andrew Haydon, M.A. '93, LL.B. Awarded on the results of the sessional examinations in the Pass class in Colonial History (History 3). Not to be held by any student unless in residence in the session following the award.

The W. M. O. Lochhead Scholarship in Economics.

Value \$50. Founded by W. M. O. Lochhead, M.A., '98, Kitchener, Ont. The Scholarship will be awarded to the student taking the highest standing in the sessional examinations and classwork in Economics 1, provided he is in attendance in some faculty of the University in the following session. It is not to be held twice by the same student.

The Adam Shortt Scholarship in Political Science.

Value \$50. Founded by G. W. Mason, Esq., K.C., in honour of Dr. Adam Shortt, formerly Professor of Economics. Awarded to the student taking the highest standing in Economics 2, provided he is in attendance in the following session and is registered in advanced work in the Department of Political and Economic Science.

The P. D. Ross Scholarship in Commerce

Value \$150. Founded by P. D. Ross, LL.D., Ottawa. Awarded on the basis of the third year's work in the Commerce Courses, provided that the candidate is taking at least four full courses or their equivalent in the "Special Subjects" in Commerce and Administration and is one year from the date of his graduation in Commerce. Tenable during the student's fourth year, if it is taken intra-murally.

Alexander Laird Scholarship in English 1.

Value \$50. Founded by the brothers and sisters of the late Rev. Alexander Laird in his memory and awarded annually to the student who makes the highest marks in English 1.

The Ann Eliza Stafford Scholarship in Biology

Value \$40. Founded by T. T. Bower, Esq., Toronto. Awarded to a graduate with first class Honours in Biology who is competent to undertake research work in Physiology. The holder must be willing to devote himself exclusively to research and must carry on his investigations in the University laboratories for at least one year from the date of his appointment.

The M. C. Cameron Scholarship in Gaelic

Value \$40. Founded by the late M. C. Cameron, M.P., Goderich. Awarded to the best Gaelic scholar, reader, and speaker. Application for examination should be submitted to the Registrar before January 15 in each year. Work prescribed: any 600 lines of Ossian's *Fingal*, Blackie's *Language and Literature of the Scottish Highlands*, Gaelic Grammar, Translation at sight of Gaelic into English and English into Gaelic. This scholarship will not be awarded to any candidate who does not take at least fifty per cent. of the total number of marks in the examination.

The Maclellan Scholarship in Greek

Value \$25. Given by the late Hon. Jas. Maclellan, LL.D., Toronto, to encourage the study of Greek in the University. Awarded on the results of the April examinations in Greek 2 to the best student who is proceeding to the Honour course in Greek. Not to be held by any student unless in actual attendance, and not necessarily to be awarded unless a sufficient degree of merit is shown.

The N. F. Dupuis Scholarship in Mathematics

Value \$60. This is one of three scholarships founded by the graduates of the University in honour of the late Professor N. F. Dupuis on the completion of his forty-five years' service as Professor in the University. The scholarship is awarded to the student who takes the highest standing in Mathematics 1 in the April examinations.

The William Moffat Scholarship

Value \$50. Founded by Dr. William Moffat of Utica and awarded annually to the student making the highest standing in first year Chemistry. The award will be made on the combined results of class work and examination, and students in both Arts and Science are eligible.

III.—SPECIAL SCHOLARSHIPS

A.—The Rhodes Scholarship

A Rhodes Scholarship is tenable for three years, and is of the value of £300 per annum. In addition a Scholar will receive until further notice an annual bonus of £50.

Scholarships will hereafter be thrown into open competition in each Province, subject to the following conditions:—

1. Candidates must be British subjects, with at least five years' domicile in Canada, and unmarried. They must have passed their nineteenth, but not have passed their twenty-fifth birthday, on October 1st of the year for which they are elected.

2. Candidates must be at least in their Sophomore Year at some recognized degree-granting University or College of Canada, and (if elected) complete the work of that year before coming into residence at Oxford.

3. Candidates must elect whether they will apply for the Scholarship of the Province in which they have acquired any considerable part of their educational qualification, or for that of the Province in which they have their ordinary private domicile, home, or residence. They must be prepared to appear before the Committee of Selection for the Province they select.

In each Province there will be a Committee of Selection in whose hands the nominations will rest.

Method of Selection

In accordance with the wish of Mr. Rhodes, the Trustees desire that "in the election of a student to a Scholarship, regard shall be had to (1) his literary and scholastic attainment, (2) his fondness for and success in manly out-door sports, such as cricket, football, and the like, (3) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness, and fellowship, and (4) his exhibition during school-days of moral force of character and of instincts to lead and take an interest in his schoolmates." Mr. Rhodes suggested that (2) and (3) should be decided in any School or College by the votes of fellow-students, and (4) by the Head of the School or College.

Where circumstances render it impracticable to carry out the letter of these suggestions, the Trustees hope that every effort will be made to give effect to their spirit, but desire it to be understood that the final decision must rest with the Committee of Selection.

The following graduates of Queen's University have been awarded Rhodes Scholarships:

J. M. Macdonnell, M.A., 1905.
Norman S. Macdonnell, 1907.
H. S. Smith, M.A., 1912.
A. G. Cumming, M.A., 1914.
K. E. Taylor, B.A., 1920.
H. R. MacCallum, B.A., 1920.

B.—The Science Research Scholarship

This scholarship of the annual value of £250 was founded by Her Majesty's Commissioners for the Exhibition of 1851, and is awarded to students who have given evidence of capacity for original research, and, except in very special circumstances, are under 26 years of age.

A given number of Scholarships are awarded annually to students in Canada recommended by the Universities approved by the Commission.

The nominee must be a British subject, must have been a *bona fide* student of Science for three years, must have been a student of this University for a full year immediately before his nomination, must be a student of this University at the time of his nomination (or he must have been a student at this University for a full year ending within twelve months prior to his nomination and since ceasing to be such student must have been engaged solely in scientific study), and must pledge himself not to hold any position of emolument while holding the scholarship without special permission from the Commissioners. He is recommended to the Commissioners by the Senate of the University. The scholarship may be held for two years, if the report of the first year's work be satisfactory to the Commissioners, and in exceptional cases for a third year. In the absence of special circumstances, the scholar will not be permitted to conduct his investigations in the country in which he received his scientific education. The particular investigation the student proposes to pursue must be stated before a scholarship can be awarded.

The scholarship is payable quarterly in advance and a grant of £25 will be paid if a satisfactory final report is presented at the expiration of the scholarship. If in the opinion of the Commissioners it is necessary a scholar will receive an additional annual allowance not exceeding £30, and in some cases the fare from their University will be partially paid.

The following Science Research scholars have been appointed from Queen's University:

Norman R. Carmichael, M.A., 1894.
Thomas L. Walker, M.A., 1896.
Frederick J. Pope, M.A., 1898.
W. C. Baker, M.A., 1900.
C. W. Dickson, M.A., 1901.
C. W. Knight, B.Sc., 1904.
F. H. McDougall, M.A., B.Sc., 1905.
Campbell Laidlaw, B.A., M.D., 1907.
N. L. Bowen, M.A., B.Sc., 1909.
Walter A. Bell, B.Sc., 1911.
John R. Tuttle, M.A., 1913.
Robert C. Cantelo, B.Sc., 1915.
Douglas G. H. Wright, B.Sc., 1921.

C.—Arts Research Fellowships

The University has established two Fellowships of the value of \$500 and two of the value of \$250, open to men and women who have taken an Honour B.A. at Queen's or an equivalent degree elsewhere. At the discretion of the Committee on Arts Research one of the \$500 Fellowships may be awarded as a Travelling Fellowship, but with this exception the appointments are given only to those undertaking graduate studies at Queen's.

A student appointed to a Travelling Fellowship must submit and have approved a plan of study, and must present a report on his year's work within twelve months of his appointment.

A student appointed to a Fellowship within Queen's may be required by the Committee in consultation with the Department concerned, to undertake work of any of the following kinds: (a) Independent investigation, (b) Assistance in research work carried on by the Department, (c) Tutorial assistance not to exceed six hours a week. The holder of a fellowship may be required to report in lectures or in written form the results of any investigations carried on.

Applications must be sent to the Registrar, accompanied by evidence of eligibility, not later than April 1 of each year.

The Fellowships will be awarded only to candidates of distinction and promise.

D.—Scholarship of the Federation of University Women.

The scholarship of the Federation of University Women in Canada, value \$1,000, available for study or research work, is open to any woman holding a degree from a Canadian university. In general, preference will be given to those candidates who have completed at least one or two years of graduate study and have a definite research in preparation. The award is based on evidence of character and ability of the

candidate and promise of success in the subject to which she is devoting herself.

For all information address the Convener of the Scholarships Committee, Mrs. Duncan B. Gillies, 25 Rathnally Ave., Toronto. Applications must be received not later than February 1st.

IV.—PRIZES

Prizes are awarded for literary articles, essays, etc., as specified under each particular prize, and the competitions are open to students of the present or the preceding session.

Conditions of Competition and Award

1. Competitive papers must be given to the Registrar not later than April 3.

2. Each paper is to bear a motto, instead of the author's name, and must have attached to it a sealed envelope, bearing the same motto and containing a written declaration over the author's signature, to the effect that it is his unaided composition.

3. The envelope attached to successful papers shall be opened and the writer's name made known at the Convocation at the close of the session.

4. Prizes will be awarded only to those productions which the examiners consider to be of sufficient merit.

5. All successful productions shall be the property of the University, and shall be at the disposal of the Senate.

Gowan Foundation No. I

Value \$25. Established by the late Sir James R. Gowan, K.C.M.G. Awarded for the best essay on *Unemployment Insurance*.

Gowan Foundation No. II

Value \$25. Given by the late Sir James R. Gowan, K.C.M.G., for the best collection of Canadian Ferns and Fern Allies. The collection must be delivered before December 15.

Gowan Foundation No. III

Value \$25 in books. Established by the late Sir James R. Gowan, K.C.M.G. Awarded in Honours in Political Science.

Latin and Greek Composition

Two prizes, each of the value of \$10 in books, are offered for competition for the best composition in Latin and Greek respectively. Subjects for composition, 1922-23: Latin Prose, Mommsen's *History of Rome*

(Dickson's translation), Book V., Chapter IX., the concluding paragraph beginning, "Now it was enough," and continuing to the end of the chapter. Greek Prose, Sargent and Dallin's *Materials and Models for Greek Prose Composition*, Nos. 19-23.

Special Prize in German

A prize of the value of \$10 in books is awarded to the student obtaining the highest standing in German 2.

Special Prize in French

A prize of the value of \$10 in books is awarded to the student obtaining the highest standing in French 2.

James C. Rogers Prize in English

A prize of the value of \$5 in books. Awarded by James C. Rogers, B.A., '94, to the student obtaining the highest standing in English 2.

Special Prize in Spanish

A prize of the value of \$10 in books is awarded to the student obtaining the highest standing in Spanish 1.

Special Prize in Italian

A prize of the value of \$10 in books is awarded to the student obtaining the highest standing in Italian 1 or 2.

Mary Fraser McLennan Prize in Hebrew

A prize of the value of \$12, founded in memory of Mary Fraser McLennan, of Lancaster, by her sons. Awarded to the student obtaining the highest standing in Hebrew 1, provided he intends to pursue a Theological course in Queen's Theological College.

V.—MEDALS

A medal is awarded by the University under the conditions stated below to the candidate who makes the highest standing in Honours in each subject, provided such standing is not less than 75 per cent.

1. A graduate in Arts or a Tutor engaged in teaching the Honour work of a competitive subject is not eligible for a medal.

2. A candidate for a medal must have completed at least six courses in the competitive subject, of which two full courses must be taken in the session at the end of which the medal is awarded.

3. The award is made on the basis of the candidate's standing in four Honour courses following course 2 and in the general examinations at the end of the Course.

GENERAL REGULATIONS

All enquiries regarding regulations should be addressed to the Registrar.

GENERAL STUDENTS

1. General students are those who do not intend to proceed to a degree. They are exempt from matriculation and sessional examinations and from the regulations regarding Courses of Study.

2. Except by special permission of the Faculty, no one is admitted to the University as a general student who is under twenty-one years of age at the date of registration.

REGULATIONS REGARDING COURSES

In addition to the regulations below, see those under "Courses of Study leading to the Degree of B.A." Note particularly the provisions for Concentration, Distribution, and Sequence of Work.

Attendance and Work

3. All students are required to write eighty per cent. of the essays and exercises, to do eighty per cent. of the required laboratory work, and to attend eighty per cent. of the class lectures during their period of intra-mural attendance, as necessary conditions of coming up for examination.

4. A student who has failed to pass the examination in any Pass course must repeat the attendance and examination in that course in his next year at the University if he intends counting that course towards a degree.

5. A student whose record is not satisfactory may be required to drop part of his work, or to change his Course. The Faculty may require a student who fails to pass in at least three courses in any of his first three years to leave the University, and will so require if such failure is repeated.

Number of Courses in a Year

6. No student is allowed to take more than five courses in the academic year.

7. An intra-mural student, unless excused for some special reason, must take five courses in each of his first and second years. In no case will such a student be allowed to take fewer than three courses in his first or second year. He may, however, with the consent of the Commit-

tee on Studies, take three or four courses in the winter session and the rest extra-murally in the summer, provided that he attends the Summer School.

8. Subject to the provisions of Regulation 7, permission to withdraw from a course may be obtained from the Faculty at any time; but permission to make a change of course may be obtained only before October 31.

Preparatory Courses

(Not offered to extra-mural students)

9. Students with full matriculation who desire to begin work in Greek, German, or Spanish may count course A in one of these subjects towards a degree. Such students may also count course A in one of these subjects toward the required number of courses for Minor, Major or Honour standing, provided that, in the case of Honours, at least five other courses are taken in the same subject.

Courses A and 1, however, may not be substituted for courses 1 and 2 where the latter are definitely prescribed.

10. Intra-mural students who desire to begin work in Latin, Greek, German, or French, and those who enter the University conditioned in any of these languages must, as a general rule, attend the Preparatory course in such language for one session, and pass the University or equivalent Pass matriculation examination before being admitted to the regular first year course in that subject. Those, however, whose previous work in a particular language has almost reached the matriculation standard, may transfer from course A to course 1 after the mid-year examination if their instructors think them capable of proceeding with first year work. But no student shall be permitted to count a Preparatory course towards a degree if he receives credit for it under these conditions.

11. Students who have taken Preparatory courses in two languages throughout the session and succeed in passing all their examinations in April may be permitted, on application to the Committee on Studies, to register for summer work in one course.

12. Students who have been granted special permission to take the first year in Arts for Matriculation purposes only, and who have passed in a Preparatory course in April, are allowed to register in course 1 during the following summer session, and to write on the September examination.

REGULATIONS REGARDING EXAMINATIONS

January Examinations

13. Mid-session examinations are held in all subjects, including courses for private work, about the second week in January. Such examinations, except as provided in Regulation 15, are final in half-courses of the first term. In courses that continue throughout the session credit not exceeding fifty per cent. of the final marks may be assigned to the January examinations.

April Examinations

14. Final examinations are held in the last week of April. Intramural students must take these examinations in all the courses and half-courses in which they are registered in the second term. (See Regulation 7.) Permission to postpone Pass examinations until September may be obtained in special cases but only upon the recommendation of the Professors concerned. Honour examinations may not be postponed. Examination Time-tables are issued each year in March.

Final Examinations for Honours

15. A candidate for the degree of B.A. with Honours must at the close of his final year pass general written and oral examinations on the whole field of his Honour work, in addition to the regular examinations in the course in which he is then registered.

This regulation will be in operation in 1923, in which year the general examinations will be merely oral.

September Examinations

16. Supplemental examinations are held in September in all courses open to Pass students. Honour examinations are given in the Honour courses offered during the summer, and students who failed in these courses in January or April may write in September with the consent of the departments concerned and of the Committee on Studies. Other supplemental Honour examinations may be given in September with the consent of the Committee on Studies, if recommended by the Departments concerned.

17. No student is permitted to take a Supplemental examination in any course or half-course in which he had made less than fifteen per cent. at the previous examination.

Admission to Examinations

(See also Regulations 3, 14, 16, and 17)

18. Students will not be permitted to write on examinations unless they have registered at the prescribed date within the academic year in

which they present themselves. (See REGISTRATION.) But graduates not in attendance who wish to take examinations merely to raise their standing may delay their registration till February 14, if applying to write at a new centre, or till March 1, if writing at an established centre.

19. At the specified date (see pages 5 and 6) before the September examinations begin, each candidate must apply to the Senate for permission to write on the subjects in which he desires to be examined. Printed forms for the purpose may be obtained from the Registrar.

20. No candidate will be allowed to appear at an examination unless his application has been approved by the Senate and his examination fees have been paid.

21. No candidate will be admitted to the examination hall later than thirty minutes after the beginning of the examination.

22. No candidate will be permitted to take any books or papers into the examination hall except by express direction of the examiner.

Determination of Standing

23. In determining a student's standing at a sessional examination the Departments are entitled to take into account the entire class record.

24. The following percentages are required for the various grades of Pass and Honour standing in all courses:

PASS STANDING

<i>Division I</i>	70 per cent. and over.
<i>Division II</i>	55 to 69 per cent.
<i>Division III</i>	40 to 54 per cent.

HONOUR STANDING

<i>Class I</i>	75 per cent. and over.
<i>Class II</i>	66 to 74 per cent.
<i>Class III</i>	50 to 65 per cent.

COURSES OF STUDY LEADING TO THE DEGREE OF B.A.

GENERAL EXPLANATIONS.

Pass and Honour Courses.

The word "Course," when printed with an initial capital, is used to indicate a programme of work leading to a degree or certificate.

A candidate for the degree of Bachelor of Arts may take a Pass Course or an Honour Course. The latter requires greater specialization and higher standards in the work of the two main subjects. Details are given below under REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS.

Courses and Half-Courses.

The word "course," printed with an initial small letter, indicates a unit of work occupying, as a rule, three hours a week throughout the session. A "half-course," on the other hand, usually occupies only one term, though occasionally it may run through the session.

Two half-courses are equivalent to a course, and when the amount of work to be done is defined in courses, it is to be understood that an equivalent in courses and half-courses may be offered.

Numbering of Courses and Half-Courses.

Preparatory courses in the languages are designated by the letter A (German A). See GENERAL REGULATIONS. Other courses are numbered with Arabic numerals (Latin 1, Greek 2). Half-courses have in addition to the numeral the letter *a* or *b*, according as they are offered in the first or second term. A half-course running throughout the session is marked *hf*. ((Chemistry 133hf.)

Courses numbered 9 and 99 are reading courses for Pass and Honour students, respectively. See Section 2 under REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS.

The fundamental courses in each subject are numbered 1 and 2 (History 1, 2 or 3) and must be taken by all proceeding to advanced work. Other courses numbered under 10 are for Pass students and courses numbered 10 and upwards are primarily for Honour students. When Pass students are admitted to an advanced course they are usually relieved of part of the reading required of Honour students and are given different examinations.

SYNOPSIS OF COURSES

The following Courses of Study are outlined in the succeeding pages:

- I. Pass and Honour Courses leading to the degree of B.A.
- II. Courses for Teachers' Certificates in the Province of Ontario.
- III. Research Courses in Biology, Biochemistry, and Bacteriology.
- IV. Course in Commerce and Administration.
- V. Combined Course in Arts and Medicine.
- VI. Combined Course in Arts and Applied Science.

I. REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

All enquiries regarding Regulations should be addressed to the Registrar.

1. Amount and Quality of Work.

A. Pass Degree. A candidate for the Pass degree of B.A. must extend his work over four years from Pass Matriculation. He must pass in nineteen courses with a minimum of forty per cent. in each and with not less than fifty-five per cent. in ten of them. A student who fails in an Honour course may count it towards a Pass degree if he makes forty per cent.

B. Honour Degree. A candidate for the Honour degree of B.A. is advised to spend five years from Pass Matriculation. Except with the permission of the Department concerned, he may not begin the Honour work in either of his two special subjects unless he has made at least fifty-five per cent. in the preceding course. This regulation, however, does not prevent a Pass student with lower standing from taking an advanced course for credit towards a Pass degree. A candidate for Honours must pass in twenty courses with a minimum of forty per cent. in each, and must make a minimum of fifty per cent. in each Honour course with an average of sixty-six per cent. in the Honour work of each special subject. In addition, at the close of his final year, he must pass examinations on the whole field of his Honour work.

2. Concentration of Work.

A. Pass Degree. Each candidate for a Pass degree shall take at least *five courses in one subject to be known as his Major and at least

*When the Major and Minor or Honour subjects belong to Group III (see the next section) and require two or three courses in other subjects as a pre-requisite (as Geology, Mineralogy, and Biology require Chemistry), they shall be reduced by the amount of work that must be taken beyond one course in the pre-requisite studies. In accordance with this regulation the University will award Honours in Science on the special Course for Teachers outlined under regulations for Specialists' certificates.

four courses in a related subject to be known as his Minor. One of the courses of the Major shall consist of prescribed private work to be done in the third or fourth year or half in the third year and half in the fourth year.

B. Honour Degree. Each candidate for Honours must take at least *twelve courses in two related subjects of which all but the first two in each subject shall be Honour courses (that is, chosen from the group numbered upwards from 10 in the departmental announcements). Ordinarily a candidate must take at least five courses in one subject, but with the consent of the departments concerned he may make the minimum four. One of the Honour courses is to consist of private work and is to be in the subject chiefly emphasized. If, however, a student takes six courses in each of his two special subjects, he may choose his reading course from either.

A student wishing to change from Pass to Honour work may count towards the required number of Honour courses as many as two advanced Pass courses in his special subjects if he has made in each a minimum of seventy per cent.

3. Distribution of Work.

A candidate for a degree must distribute his work so as to include the courses indicated under each of the following groups:

<i>Group I</i>	<i>Group II</i>	<i>Group III</i>
LANGUAGE AND LITERATURE	PHILOSOPHY, HIS- TORY, POLITICAL & ECONOMIC SCIENCE	MATHEMATICS AND SCIENCE
<i>English 1 and 2</i>	<i>Philosophy 1 or 2</i>	<i>Mathematics 1</i>
¹ <i>Latin 1 and 2</i>	⁴ <i>Two of</i>	⁴ <i>Two of</i>
² <i>One of</i>	<i>Philosophy 1</i>	<i>Physics 1</i>
<i>Greek 1 and 2</i>	<i>Philosophy 2</i>	<i>Physics 2</i>
<i>German 1 and 2</i>	<i>History 1</i>	<i>Chemistry 1</i>
<i>French 1 and 2</i>	<i>History 2</i>	<i>Chemistry 2</i>
	<i>History 3</i>	<i>Biology 1</i>
	<i>Economics 1</i>	<i>Biology 2</i>
	<i>Economics 2</i>	<i>Geology 1</i>
		³ <i>Mineralogy 1</i>

¹A student whose Major and Minor are in Group II will not be required to take Latin 2; a student whose Honour subjects are in Group II may omit either Latin 2 or Mathematics 1; a student whose Major and Minor or Honour subjects are in Group III may omit Latin or take it as an optional subject.

²A student whose Major and Minor or Honour subjects are in Group

Hebrew, Italian and Spanish may be counted towards a degree as optional subjects, but of these three, only Spanish may be taken as a Minor, Major or Honour subject.

Spanish and Italian may not both be counted towards a degree, but with the consent of the Department of Spanish, students taking a Major or Honours in Spanish may substitute Italian 1 for one of their lecture courses in Spanish.

4. Sequence of Work.

In each of his second, third, and fourth years a student must have his programme of work approved by the Committee on Studies.

The courses in each subject must be taken in the order prescribed in the Departmental announcements. Ordinarily course 1 is pre-requisite to course 2 and course 2 is pre-requisite to all other courses, but slight variations from this order are permitted by the Departments of English, History, Economics, Philosophy, and Mathematics.

First Year

A student entering with Pass Matriculation shall take the following five* courses in his first year:

1. Latin 1 (But those choosing their Major and Minor or Honour subjects from Group III must take Physics 1 instead of Latin 1. The latter may be taken later as an option.)
2. Greek 1, German 1, or French 1
3. English 1
4. Mathematics 1
5. A Science or a third foreign language. (Those choosing a third foreign language as one of the two special subjects must take it at this point; all others should select a Science course, and those specializing in Group III should take Chemistry 1.)

II or Group III may, upon giving sufficient reason, obtain special permission to substitute a course in another language for course 2 in Greek, German, or French. Latin, however, may be substituted without permission.

³Mineralogy may be taken only by students who have had matriculation Chemistry or Chemistry 1 or are taking Chemistry 1 concurrently.

⁴An Honour student not specializing in this Group may omit one of these courses.

*Students in their first or second years who are unable to carry the required five courses may, with the consent of the Committee on Studies, take three or four in the winter and the rest extra-murally in the summer, provided that they attend the Summer School.

Students will note that no course in Group II may be taken by a Pass Matriculant in his first year.

Students requiring for any purpose a certificate of having completed the first year's work must take the following five courses: (1) Latin 1; (2) Greek 1, German 1, French 1, or Spanish 1; (3) English 1; (4) Mathematics 1; (5) Physics 1 or Chemistry 1, or another of the courses named in (2).

Intra-mural students without matriculation in any of the languages must take the Preparatory course in that language. See regulations regarding Preparatory courses.

Second Year

A student in his second year shall take *five courses; he shall continue at least two subjects of his first year and include at least one subject from Group II.

Third and Fourth Years

A student intending to graduate in four years must in his third and fourth years take the remaining courses of his Minor, Major, or Honour subjects and such additional prescribed or optional work as may be necessary to satisfy the requirements for a degree—nineteen courses for a Pass student and twenty for an Honour student.

SPECIMEN COURSES.

Specimen plans of work are given below, but subject to the regulations regarding Sequence of Work they may be modified to suit individual convenience. The two related subjects on which each student must concentrate need not be in the same Group.

Pass.

Plan I. Special work in Group I.

First Year

1. Latin 1
2. Greek 1, French 1, or German 1
3. English 1
4. Mathematics 1
5. Science (*or a third foreign language)

Second Year

- Latin 2
- Greek 2, French 2, or German 2
- English 2 (*or a third foreign language)
- †Course from Group II
- Science (*or a third foreign language)

†One of the courses from Group II must be Philosophy 1 or 2.

*If a third foreign language (Spanish, or a second from the group of Greek, French, and German) must be taken in the first year because it is one of the special subjects, it will replace Science. In that case it may be continued in the second year in the place of English 2 or Science, and the subjects so postponed may be taken in the place of "Any course" in the third and fourth years.

Third Year

1. Major from Group I
2. Minor from Group I
3. Course from Group II
4. Course from Group II
5. Any course

Fourth Year

- Major from Group I
- Major from Group I
- Minor from Group I
- Any course

*Plan II. Special work in Group II.**First Year*

1. Latin 1
2. Greek 1, German 1, or French 1
3. English 1
4. Mathematics 1
5. Science

Second Year

- †Major from Group II
- Major from Group II
- Minor from Group II
- Greek 2, German 2, or French 2;
or Latin 2
- English 2 or Science

Third Year

1. Major from Group II
2. Minor from Group II
3. Minor from Group II
4. Any course; or course in Minor*
5. Science or English 2

Fourth Year

- Major from Group II
- Major from Group II
- Minor from Group II
- Any course

*Plan III. Special work in Group III.**First Year*

1. Physics 1
2. Greek 1, German 1, or French 1
3. English 1
4. Mathematics 1
5. Chemistry 1

Second Year

- Greek 2, German 2, or French 2;
or Latin 1 or 2
- English 2*
- Course from Group II
- Major from Group III
- Minor from Group III

Third Year

1. Course from Group II
2. Major from Group III
3. Minor from Group III
4. Any course; or course in Minor*
5. Any course

Fourth Year

- Course from Group II
- Major from Group III
- Major from Group III
- Minor from Group III

†If Philosophy is not the Major or Minor it will be necessary to take Philosophy 1 or 2 where "any course" is indicated.

*If the Major and Minor are subjects not begun in the first year, nine hours must be given to them in the third year. If Chemistry 2 is needed as a pre-requisite, it must be taken in place of English 2 in the second year and the latter postponed till the third year.

Honours.

An Honour student who wishes to complete his work in four years will take courses in his special subjects where Major or Minor courses appear in the above plans and a fifth course in his fourth year. To find room for the required twelve courses in his two special subjects, he will often find it necessary to avail himself of the privilege of omitting a course from Group II and a course in Science (see Regulations for Distribution) and to substitute for these and for "any course" work in his Honour subjects.

II. ACADEMIC REQUIREMENTS FOR TEACHERS' CERTIFICATES IN THE PROVINCE OF ONTARIO

(Agreement of 1920)

I. Ordinary Certificates

The academic standing for admission to the professional Course leading to an ordinary High School Assistant's certificate is the degree of Bachelor or Master of Arts, Bachelor or Master of Science, or Bachelor of Commerce, from a British University, based upon Courses approved by the Minister of Education.

Each applicant must have Honour Matriculation standing in English, History, and Mathematics, or equivalent, if his degree Course did not include these subjects.

II. Specialists' Certificates

Subject to the conditions specified below, the academic standing for admission to the professional Courses leading to High School Specialists' certificates in

Greek and Latin

English and History

English and French

English and German or Spanish

French and German or Spanish

Mathematics and Physics

Science (see foot-note, p. 65)

is an Honour degree in Arts from one of the following Universities: Queen's University, the University of Toronto, McMaster University, Western University.

1. The Courses in the Departments specified above shall be the Honour Courses as defined in the calendars of the respective Universities for the year 1920-21. After due notice from any one of the four Universities, the Minister may accept modifications of its Courses² for Specialist standing. (See foot-note, p. 65.)

2. Honour degrees in Arts from other British Universities on Courses which are deemed to be the equivalent of those prescribed in the calendars of the four Ontario Universities may be accepted for Specialist standing.

3. The Courses shall extend over at least five years from Junior Matriculation or, as may be determined by the regulations of the University concerned, over four years from Honour Matriculation.

4. Candidates shall attend for at least two full academic years. Under the direction of the University they may substitute for one of those years at least two Summer sessions.

5. The standard for each year shall be that prescribed by the University for candidates taking Honour Courses, with the additional provision that in the Final Honour work of the department in which Specialist standing is sought, the standard shall be at least Second Class Honours (66%). [This regulation, as phrased, assumes a year-system. The Department of Education, however, approves the methods of determining Honour standing which are employed at this University.]

6. The Minister shall have authority to deal with any case not covered under the above. Each University shall submit a recommendation to the Minister on any case whose merits justify special consideration.

¹Students who desire a Specialist's certificate in Science should take the Honour Course in two of Physics, Chemistry, and Biology, or the following special Course for Teachers:

English 1, 2

Greek, French, or German 1

Greek, French, or German 2; or Latin; or Spanish (by special permission)

Philosophy 1 or 2

One other course from Group II

Mathematics 1, 2

Physics 1, 2, and an advanced course

Chemistry 1, 2, and an advanced course

Biology 1, 2, and an advanced course

Another advanced course in Physics, Biology, or Chemistry

Geology 1

Mineralogy 1

²The Commercial Specialist option in the Courses in Commerce and Administration in Queen's University is accepted as the non-professional qualification for a Commercial Specialist's certificate. For further particulars, consult the ANNOUNCEMENT OF THE COURSES IN COMMERCE AND ADMINISTRATION, of which copies may be obtained from the Registrar.

III. Inspectors' Certificates

The academic qualifications for an Inspector's certificate under the new agreement may be learned upon application to the Registrar at the beginning of the session 1922-23.

III. RESEARCH COURSES IN BIOLOGY, BIOCHEMISTRY, AND BACTERIOLOGY

Each of the Courses outlined below leads to the degree of B.A. with Honours in Science, subject to the general regulations for an Honour degree.

Though the work is arranged in years, the order of the courses may be modified to suit individual convenience.

Between the third and fourth sessions three months of supervised research are required.

<i>First Year (all three Courses)</i>	<i>Second Year (all three Courses)</i>
1. English 1	English 2
2. Mathematics 1	French 1 or German 1
3. Medical Chemistry 1	Medical Chemistry 2
4. Physics 1	Physics 2
5. Biology 1	Biology 2

Third Year

The courses named in one of the following three special fields of study:

Biology: French or German or Scandinavian; course from Group II (see page 62; Bacteriology 1; two courses in Biology.

Biochemistry: French or German; course from Group II (see page 62); Bacteriology 1; two courses in Chemistry.

Bacteriology: French or German; course from Group II (see page 62); course in Chemistry; two courses in Bacteriology.

Fourth Year

The courses named in the field of study selected in the third year:
Biology: course from Group II; Physical Chemistry; course in Chemistry: two courses in Biology.

Biochemistry: course from Group II; Advanced Physiological Chemistry; Physical Chemistry or Bacteriology; Physiology of Plants or Animals.

Bacteriology: course from Group II; course in Biology; course in Chemistry; two courses in Bacteriology.

IV. COURSES IN COMMERCE AND ADMINISTRATION

These Courses, leading to the degree of Bachelor of Commerce, were established in 1919 to assist in meeting the need which exists in Canada of more systematic training for business and public service.

The Courses in Banking established in 1914 by Queen's University in co-operation with the Canadian Bankers' Association will hereafter be continued as part of the Courses in Commerce and Administration.

For further particulars consult ANNOUNCEMENT OF THE COURSES IN COMMERCE AND ADMINISTRATION, of which copies may be obtained from the Registrar.

V. COMBINED COURSE IN ARTS AND MEDICINE.

A course leading to the Degrees of B.A. and M.D. in seven years.

Students taking this Course are required to register for the first two years in Arts alone and to pay the class, laboratory, and registration fees in Arts; to register for the third and fourth years in both Arts and Medicine, paying the registration fees only in Arts and the medical fees in full; and in the last three years to register in Medicine alone, paying the medical fees in full for those years.

Candidates for the degrees of B.A. and M.D. in the Combined Course should indicate that fact upon their first registration.

Arts courses are subject to the regulations in the Arts calendar and the courses in Medicine to the regulations in the Medical calendar.

The degree of B.A. will be conferred upon students who in the nineteen courses required make a minimum standing of forty per cent., with at least fifty-five per cent. in half their work.

The degree of M.D. will be conferred upon students who in addition to the courses specified below take the full medical work of the fourth, fifth, and sixth years in Medicine. The fifth year of the Combined Course is the fourth year in Medicine.

First Year

English 1
 French 1 or German 1¹
 Mathematics 1
 Chemistry 1
 Physics 1

Second Year

English 2
 French 2 or German 2 or Latin 1
 Chemistry 2
 Physics 2 (Medical)
 Biology (1st year Medical)

Students who have completed the first or second years of the old Combined Course should consult the Registrar at once regarding their transfer to the new Course.

Third Year

Anatomy
 Histology
 Embryology
 Chemistry A 21
 One of
 Economics 2
 History 1 or 16
 German 2

Fourth Year

Physiology
 Chemistry M 61
 Bacteriology
 Histology (review)
 Anatomy
 One course from
 French 1
 German 1
 English 22a, 24b
 History 2
 Economics 25a, 56b

Fifth Year

Psychology

VI. COMBINED COURSE IN ARTS AND APPLIED SCIENCE

A course leading to the Degree of B.A. and B.Sc. in six years.

Students taking this Course are required to have Arts Matriculation and to register for the first two years in Arts alone and to pay the class and registration fees in Arts; to register for the second two years in both Arts and Applied Science and to pay both registration fees and the Applied Science class fees; and to register for the last two years in Applied Science only, paying registration and class fees. Arts classes are subject to the regulations in the Arts Calendar and Applied Science classes to the regulations in the Applied Science Calendar; but the regulations of the Faculty of Applied Science concerning students who fail to pass their classes will apply to this Course throughout.

The courses must be taken in the order in which they are laid down in the Calendar.

The degree of B.A. will not be granted on this Course for less than four years' work.

Subjects numbered in Roman numerals are taken in the Faculty of Applied Science.

¹A fully matriculated student desiring to begin another language may offer the Preparatory and First Year courses in one of these languages in stead of courses 1 and 2.

First Year

1. English 1
2. French 1 or German 1
3. Mathematics 1
4. Mathematics IV. (Science).
5. Astronomy I. (Science).
6. Physics 1
7. Chemistry 1

Second Year

- English 2
French 2 or German 2; or Latin,
Greek, or Spanish
Course from Group II¹
Course from Group II
Course in a subject previously
taken, but not covered by the
later courses in Science.

Third Year

1. Course from Group I.
2. Course in a subject previously taken, but not covered by the later courses in Science.
3. Mathematics I, II. and III.
4. Surveying I.
5. Drawing I.
6. Projections I.

Fourth, Fifth, and Sixth Years

The fourth, fifth, and sixth years are the same as the second, third, and fourth years of the B.Sc. Courses. See the Calendar of the Faculty of Applied Science.

¹Philosophy 1 or 2 must be included among the courses taken from Group II.

DETAILS OF COURSES OF INSTRUCTION

LATIN LANGUAGE AND LITERATURE

PROFESSOR—Richard Orlando Jolliffe, Ph.D.

PROFESSOR OF CLASSICS—George W. Mitchell, M.A.

INSTRUCTOR—Mary L. Macdonnell, M.A.

GENERAL NOTICE TO STUDENTS IN LATIN

A good Latin dictionary is an absolute necessity. For the Pass classes, Smith's *Smaller Latin-English Dictionary* (Murray) or Lewis' *Latin Dictionary for Schools* (Oxford Press) is recommended. Honour students should procure Lewis and Short's *Latin Dictionary* (Oxford Press). All students should provide themselves with a Classical Dictionary—Smith's *Smaller Classical Dictionary* (Everyman's Library) is convenient and cheap—and a Classical Atlas (*Atlas of Classical Geography* in Everyman's Library or Murray's *Classical Atlas*). A history of Latin literature is indispensable: Mackail's *Latin Literature* (Murray) is recommended. For any advanced work a good grammar such as that of Gildersleeve and Lodge or of Allen and Greenough will be found essential. Gow's *Companion to School Classics* (Macmillan) is a useful general handbook. Honour students should also consult the *Cambridge Companion to Latin Studies*.

PROSE COMPOSITION. Students taking Latin as their Major or Minor, and Honour students in their first year will use Allen's *Latin Exercise Book* (Oxford Press).

SIGHT TRANSLATION. The best preparation for translation at sight consists in the careful and honest reading of the prescribed texts without the aid of a translation.

REGULATIONS

1. A Minor in Latin consists of four courses: 1, 2, and four of the following half-courses: 11a, 12b, 18a, 25a, 28b.

2. A Major in Latin consists of five courses: 1, 2, 9 a-b, and four of the following half-courses: 11a, 12b, 18a, 25a, 28b.

3. For Honours in Latin a student will take courses 1 and 2 and from three to five other courses, among which 11a, 12b, 18a, 25a, 28b must be taken, and 99 a-b if the reading course is in Latin.

4. The courses corresponding to the old Preliminary Honours are 10b, 11a, 12b, 18a; and to the old Final Honours are 11a, 12b, 25a, 28b.

5. Extra-mural instruction will be given in courses marked *, viz.: 1, 2, 10b, 11a, 12b, 18a, during the winter session, and in courses 1, 2, and 20b during the summer. Exercises in prose composition will be assigned on registration.

COURSES OF INSTRUCTION

LATIN A. PREPARATORY COURSE. This class will read the texts prescribed for Pass Matriculation. For grammar and composition Mitchell's *Introduction to Latin Prose* (Revised Edition, Macmillan) will be used.

Tuesday, Thursday, and Saturday at 2.

***LATIN 1. TRANSLATION AND INTERPRETATION of Prescribed Texts, Sight Translation, Prose Composition.**

Note.—The examination will be divided into three sections corresponding to the above. Students must satisfy the examiners in each of the three sections of the paper.

Prescribed Texts:

Petrie's *A Latin Reader with an Introduction to Roman History* (Oxford Press); Selections from Nepos, Caesar, Cicero, Virgil, Horace and Ovid.

Sight Translation of passages similar in style and difficulty to the prescribed texts.

Prose Composition based on the prescribed texts and on Mitchell's *Introduction to Latin Prose* (Revised Edition, Macmillan).

Sec. A: *Monday, Wednesday and Friday at 10.*

Sec. B: *Tuesday, Thursday and Saturday at 10.*

Professor Jolliffe, Professor Mitchell.

***LATIN 2. TRANSLATION AND INTERPRETATION of Prescribed Texts, Sight Translation, Prose Composition.**

Note.—The examination will be divided into three sections corresponding to the above. Students must satisfy the examiners in each of the three sections of the paper.

Prescribed Texts:

Sallust, *Catiline* (Summers, Pitt Press).

Virgil, *Aeneid VI* (Sidgwick, Pitt Press).

Cicero, *In Catilinam II, IV* (Upcott, Oxford Press).

Sight Translation of passages similar in style and difficulty to the prescribed texts.

Prose Composition based on the prescribed texts and on Mitchell's *Introduction to Latin Prose* (Revised Edition, Macmillan).

Tuesday, Thursday and Saturday at 11.

Professor Jolliffe, Professor Mitchell.

LATIN 9 a-b.—Reading course for Pass students taking Latin as a Major.

*LATIN 10b. ROMAN HISTORY.

A rapid survey of early civilization, based on the first two Parts of Breasted, *Ancient Times*. A general account of the history and culture of Rome, down to the extinction of the Empire in the West, 476 A. D.

The manuals recommended are Shuckburgh, *History of Rome*, or Pelham, *Outlines of Roman History*, and Stuart Jones, *Roman Empire*.

Tuesday, Thursday and Saturday at 10. Professor Callander.

*LATIN 11a. Cicero, *The Orations*.

Special attention will be given to the subject-matter and historical setting of the speeches read.

Poynton, *Pro Milone* (Oxford Press).

Fausset, *Pro Marcello* (Oxford Press).

Mayor, *Philippica Secunda* (Macmillan).

Monday, Wednesday, and Friday at 9. Professor Callander.

*LATIN 12b. Horace, *Satires and Epistles*.

This course will deal with the history of Satire as a literary form; but the chief emphasis will be laid on the study of the poet's personality and his development of a philosophy of life.

Monday, Wednesday, and Friday at 9.

LATIN 17a. Livy, Books I, IX, XXI, XXII. Lectures will be given on (a) Livy as a stylist and as a historian; (b) the regal period; (c) the conquest of Italy; (d) the struggle between Rome and Carthage for the commercial supremacy of the Mediterranean world.

Not given in 1922-23.

*LATIN 18a. Virgil, *Aeneid*. About 3000 lines will be selected for intensive study, with a view to bringing out the essential characteristics of the poet's art and the influence of his environment, his personality, and the literary tradition upon the *Aeneid*.

Tuesday, Thursday, and Saturday at 10. Professor Jolliffe.

LATIN 19a. Roman History. The period of republican decline (133 B.C.-31 B.C.) will be studied in detail, with special reference to its economic and constitutional aspects.

Not given in 1922-23.

LATIN 20b. Cicero, *The Letters* (Abbot, Ginn and Co.). This course will illustrate the political movements of the period as well as Cicero's personal and political friendships; it will also afford material for judging the ethical and political principles which he followed in his private and public life.

Not given in 1922-23.

LATIN 21b. Juvenal's *Satires* and Pliny's *Epistles*. A study of life and manners in the first century of the Roman Empire from two contrasting points of view.

Not given in 1922-23.

LATIN 22a. Lucretius, *De Rerum Natura*. About 2000 lines will be chosen for intensive study. Lectures will be given on (a) early Greek philosophy; (b) Lucretius and anthropology.

Not given in 1922-23.

LATIN 23a. Virgil, *The Eclogues* and *Georgics*. The topics studied will include (a) the sources and development of pastoral poetry; (b) didactic poetry; (c) Virgil as the poet of Italy.

Not given in 1922-23.

LATIN 25a. Latin Lyric Poetry, Horace and Catullus. Attention will be directed in this course almost entirely to the literary study of the poems and to the illustration of their influence on English poetry.

Monday, Wednesday, and Friday at 11. Professor Jolliffe.

LATIN 26b. Latin Comedy. A brief study of the origin and development of Roman comedy will be supplemented by the rapid reading of the *Captivi* of Plautus and the *Adelphi* and *Phormio* of Terence.

Not given in 1922-23.

LATIN 27a. Martial, *The Epigrams* (Post, Ginn & Co.). This course deals with the fun and foibles of society and with the lighter side of Roman life. Not given in 1922-23.

LATIN 28b. ROMAN PRIVATE AND PUBLIC LIFE.

A course of lectures (accompanied with readings from the sources) on the genesis and development of Roman magistracies and political institutions. The study of private life will be illustrated by means of photographs and lantern slides, from archaeological remains at Rome, Herculaneum and Pompeii.

Monday, Wednesday, and Friday at 11. Professor Jolliffe.

LATIN 99 a-b. Reading course for Honour students.

LATIN 100. THE LATIN NOVEL. Apuleius, *The Metamorphoses*.

This course will include lectures on (i) The sources and develop-

ment of the Latin novel; (ii) The Roman belief in magic; (iii) The religion of Isis.

Open only to candidates for the degree of M.A.

LATIN 101. PROBLEMS IN LATIN SYNTAX.

A historical and comparative study of the development of Latin Syntax.

Prerequisite: A reading knowledge of Greek, especially of Homer.

Open only to candidates for the degree of M.A.

LATIN 102. THE FOUNDATION OF THE PRINCIPATE.

A study of the period from the original sources (Cicero's Letters, Tacitus' Annals, Suetonius, Plutarch and Dio Cassius will be read in translation).

Open only to candidates for the degree of M.A.

GREEK LANGUAGE AND LITERATURE

PROFESSOR—T. Callander, M.A.

PROFESSOR OF CLASSICS—G. W. Mitchell, M.A.

INSTRUCTOR—Mary L. Macdonnell, M.A.

GENERAL NOTICE TO STUDENTS IN GREEK

The *Greek Dictionary* recommended is by Liddell and Scott. A *Greek Grammar*, preferably Goodwin's or Smyth's, is also necessary. Murray's *Classical Atlas*, Jebb's *Primer of Greek Literature*, Maisch's *Greek Antiquities*, and Bury's *History of Greece* are indispensable.

PROSE COMPOSITION. Students taking Greek as their Major or Minor, and Honour students in their first year work, will use Sidgwick's *Greek Prose Composition*.

REGULATIONS

Greek A may be counted towards a degree and towards a Minor or a Major or Honours under conditions specified in section 9 of GENERAL REGULATIONS. Students who enter the University without matriculation in Greek, and yet desire to specialize in this subject, may complete their programme of work in the usual time.

For Pass students a Minor in Greek consists of four courses, including 1 and 2; while a Major in Greek consists of five courses, including 1, 2 and 9 a and b.

For Honours in Greek a student must take from five to seven courses, including 1, 2, 10a, 11a, 12b, 13b. If the reading course is in Greek 99 a and b must be taken.

The courses corresponding to the old Preliminary Honours are 10a, 11a, 12b, 13b.

The courses corresponding to the old Final Honours are 12b, 13b, 14a, 15a.

Extra-mural instruction both in winter and in summer will be given in the courses marked with an asterisk, viz.: 1, 2, 10a, 11a, 12b, 13b.

COURSES OF INSTRUCTION

GREEK A. FOR BEGINNERS. This class will cover the texts prescribed for Pass Matriculation, together with a course in Composition and Greek History.

Tuesday, Thursday, and Saturday at 11. Miss Macdonnell.

*GREEK 1.

1. TEXTS FOR SPECIAL STUDY:

Robertson's *Greek Reading* (Camb. Univ. Press).

Rennie, *Selections from Homer*. (Edward Arnold).

The Acts of the Apostles.

2. UNSEEN TRANSLATION.

3. COMPOSITION.

Pitman, *Greek Prose Composition*.

4. GRAMMAR.

Goodwin, *Greek Grammar*.

Tuesday, Thursday, and Saturday at 10. Miss Macdonnell.

*GREEK 2.

1. TEXTS FOR SPECIAL STUDY:

Euripides, *Alcestis*.

Plato, *Apology of Socrates*.

The Epistle to the Galatians.

2. UNSEEN TRANSLATION.

3. COMPOSITION.

North and Hillard, *Greek Prose Composition*.

4. GRAMMAR.

Goodwin, *Greek Grammar*.

5. GENERAL READING:

Jebb, *Primer of Greek Literature* and *Introduction to Homer*.

Maisch, *Greek Antiquities*.

Bury, *History of Greece*. Every member of the class in Greek 2 should make himself familiar with the outlines of Greek History at the beginning of his course. Lectures on this subject will be given during the session.

Monday, Wednesday, and Friday at 11. Professor Callander.

GREEK 9 a and b. Reading course for Pass students taking Greek as a Major.

*GREEK 10a. GREEK HISTORY. Bury, *History of Greece*; as an introduction to the subject the first two Parts of Breasted, *Ancient Times*, should be read. This course, together with a course in Roman History, namely, Latin 10b, is accepted by the History Department as a Pass Class. For students who take Greek 10a or Latin 10b as part of their Honour work, additional reading will be prescribed.

Tuesday, Thursday, and Saturday at 10. Professor Callander.

*GREEK 11a. GREEK EPIC. Intensive reading of certain books of Homer, with rapid survey of the *Iliad* and the *Odyssey* in translation.

Tuesday, Thursday, and Saturday at 9. Professor Jolliffe.

*GREEK 12b. THE GREEK HISTORIANS. Select texts of Herodotus and Thucydides.

Tuesday, Thursday, and Saturday at 9. Professor Callander.

*GREEK 13b. GREEK TRAGEDY. A play of Aeschylus, of Sophocles, and of Euripides, with topics of a wider range belonging to this field.

Tuesday, Thursday, and Saturday at 11. Professor Callander.

GREEK 14a. GREEK COMEDY. Two plays of Aristophanes, together with select portions of Menander.

Tuesday, Thursday, and Saturday at 9. Professor Callander.

GREEK 15a. GREEK PHILOSOPHY. Plato's Republic and part of Aristotle's Ethics.

GREEK 16b. THE ORATORS. Select works of Lysias and Demosthenes.

GREEK 17b. THE BUCOLIC POETS.

GREEK 99 a and b. Reading course for Honour students where required.

GREEK 100. GREEK LYRIC POETRY.

GREEK 101. THE HELLENISTIC PERIOD AND THE NEW TESTAMENT.

GREEK 102. BYZANTINE HISTORY AND CULTURE.

SEMITIC LANGUAGES AND LITERATURE

PROFESSOR—Rev. W. G. Jordan, B.A., D.D.

FELLOW AND TUTOR—Rev. W. T. McCree, M.A.

GENERAL NOTICE TO STUDENTS IN HEBREW

Students in Hebrew, especially those who purpose to do work in Honours, are recommended to provide themselves with a good lexicon, a critical edition of the Hebrew Old Testament, and, if possible, Cowley's translation of Kautzsch's *Gesenius' Hebrew Grammar* (Oxford, 1910). *The Oxford Hebrew Lexicon* by Brown, Driver, and Briggs is expensive but almost indispensable for advanced students. Kittel's *Biblia Hebraica* is the best moderate-priced critical Hebrew Bible. These books are in the University Consulting Library and, in any case, students are expected to use them regularly as books of reference.

Semitics 1 and 2 will be offered during the session 1922-1923.

Until further provision is made for the teaching of the cognate languages the advanced courses in Semitics are withdrawn. The attention of students is called to the half-courses in Semitic History and Literature, offered by Professor Jordan as History 5a and English 5b.

COURSES OF INSTRUCTION

SEMITICS 1: ELEMENTARY HEBREW.

1. GRAMMAR AND COMPOSITION: the class lectures; exercises in the first twenty chapters of Davidson's *Hebrew Grammar* (Nineteenth Edition: Revised by J. E. McFadyen; pub. by T. and T. Clark); the Regular Verbs, pp. 208-9.

2. TRANSLATION: *Genesis*, Chapter I; *Psalms*, I and CIII; *I Samuel*, Chapters III-V.

3. SIGHT TRANSLATION.

Tuesday, Thursday and Saturday at 8.

SEMITICS 2: HEBREW.

1. GRAMMAR AND COMPOSITION: the class lectures (one hour a week); exercises in Chapters XX to XXXVIII, inclusive, of Davidson's *Hebrew Grammar* (Nineteenth Edition: Revised by J. E. McFadyen; pub. by T. and T. Clark); the Irregular Verbs, pp. 212-221.

2. SYNTAX: the class lectures.

3. TRANSLATION.

Isaiah, Chapter XL.

Jonah.

II Samuel, Chapters XIV-XVIII.

Monday, Wednesday and Friday at 8.

GERMANIC LANGUAGES AND LITERATURES

PROFESSOR—John Macgillivray, B.A., Ph.D.

ASSISTANT PROFESSOR—

REGULATIONS

1. German A may be counted towards a degree and towards a Minor or a Major or Honours under conditions specified in section 9 of GENERAL REGULATIONS. Students who enter the University without matriculation in German, and yet desire to specialize in this subject may complete their programme of work in the usual time.

2. The Minor in German consists of four courses or equivalent, including 1, 2, 11a, and 12b.

3. The Major in German consists of five courses or equivalent, including 1, 2, 11a, 12b, and 9.

4. Students making German one of their Honour subjects must take from five to seven courses or equivalent, including 1, 2, 11a, 12b. Those who make German their main subject must also take 99.

5. Courses 21b—26b are of a less advanced character than courses 31a—33b.

6. Extra-mural instruction is offered in all courses except A, B, 3a, and 33b.

7. Students taking a Minor, a Major, or Honours in German should read as many of the prescribed works as possible during the long summer vacation.

8. Students completing their programme of work under the old system of studies will take for Preliminary Honours the half-courses 11a, 12b, and any two of the half-courses 21b—26b; for Final Honours, any four of the half-courses 21b—33b.

9. The prescriptions given below under courses 11a—33b are for Honour students. But a lower standard and fewer works are required from Pass students.

10. While the direct method will be more or less used from the beginning, the advanced classes will be conducted mainly in German.

COURSES OF INSTRUCTION

A. PREPARATORY GERMAN.

This course is intended to meet the needs of students who, owing to the inadequate conditions in most of the secondary schools,

enter the University with little or no knowledge of German. It is taken by students who need it to complete their Matriculation, or who desire to pursue a course in which German text-books or works of reference are prescribed or recommended. The requirements correspond generally to those for Pass Matriculation.

The work comprises drill on pronunciation, a study of the elements of grammar, the reading of easy literature, dictation, oral and written composition.

Text-books:—

Schrag and Alexis, *First Course in German* (Badger).

Volkman-Leander, *Träumereien* (Ginn).

Collmann, *Easy German Poetry* (Ginn).

Tuesday, Thursday and Saturday at 8. Professor Macgillivray.

Or some other time to be agreed upon.

B. ELEMENTARY SCANDINAVIAN.

The aim of this course is to give the student a reading knowledge of Swedish and Dano-Norwegian, and thus open to him the rich store of modern Scandinavian literature.

A knowledge of German is not required, but is helpful. Students specializing in German, and desiring advanced credit for this work, should register for courses 25a and 26b instead.

Text-books:—

Elmquist, *Swedish Grammar* (Augustana Book Concern).

Lagerlöf, *Valda Berättelser* (Augustana Book Concern).

Ibsen, *Et dukkehjem* (Gyldendalske Boghandel).

Björnson, *Synnöve Solbakken* (Free Church Book Concern).

Tuesday, Thursday and Saturday at 10.

1. INTERMEDIATE GERMAN.

The work embraces the reading of modern authors, a more advanced study of grammar and syntax, memorizing of poems, writing from dictation, translation at sight, composition and oral practice.

Text-books:—

Heyse, *L'Arrabbiata* (Holt).

Storm, *Der Schimmelreiter*, pp. 1-70 (Ginn).

Seidel, *Leberecht Hühnchen* (Scribner).

Volkman-Leander, *Träumereien* (Ginn).

Collman, *Easy German Poetry* (Ginn).

Klee, *Deutsche Mythologie*—selections (Velhagen).

Lyon, *Handbuch der deutschen Sprache, I* (Teubner).

Tuesday, Thursday and Saturday at 9.

2. ADVANCED GERMAN.

The work consists of a more critical reading of modern literature, both prose and verse, oral and written composition based on this literature, and a more advanced study of grammar and syntax.

Text-books:—

- Goethe, *Das Märchen* (Heath).
 Storm, *Der Schimmelreiter* (Ginn).
 Grillparzer, *Der arme Spielmann* (Heath).
 Heyse, *Vetter Gabriel* (Holt).
 Smitthenner, *Ad'm, Friede auf Erden* (Wiesbaden).
 Collman, *Easy German Poetry* (Ginn).
 Klee, *Deutsche Mythologie* (Velhagen).
 Lyon, *Handbuch der deutschen Sprache, I* (Teubner).
Monday, Wednesday and Friday at 10.

3a. SCIENTIFIC GERMAN.

This course is designed for students who are doing advanced work in Chemistry, Physics, Geology, Mineralogy, Biology, and Anatomy. The reading will be selected to suit the members of the class.

Prerequisite: German A, or Matriculation in German.

Text-books:—

- Wait, *A German Science Reader* (Macmillan).
 Helmholtz, *Populäre Vorträge* (Heath).
 Du Bois-Reymond, *Wissenschaftliche Vorträge* (Ginn).
Monday, Wednesday, and Friday at 9, or at a time to be selected.

9. READING COURSE for Pass students taking German as a Major.

(a) The Literature of the Nineteenth Century.

The following works are read:

- Grillparzer, *Sappho* (Macmillan).
 Hebbel, *Agnes Bernauer* (Heath).
 Ludwig, *Zwischen Himmel und Erde* (Heath).
 Freytag, *Soll und Haben* (Ginn).
 Raabe, *Else von der Tanne* (Oxford Press).
 Fiedler, *A Book of German Verse* (Oxford Press).
 Weitbrecht, *Deutsche Literaturgeschichte des neunzehnten Jahrhunderts* (Götschen).

(b) Contemporary German Literature.

The following works are read:

- Fontane, *Grete Minde* (Holt).
 Hauptmann, *Vor Sonnenaufgang* (Fischer).
 Sudermann, *Frau Sorge* (Holt).
 Fulda, *Der Dummkopf* (Holt).

Zahn, *Vier Erzählungen* (Deutsche Verlagsanstalt).

Fiedler, *A Book of German Verse* (Oxford Press).

Weitbrecht, *Deutsche Literaturgeschichte des neunzehnten Jahrhunderts* (Götschen).

11a. SCHILLER'S LIFE AND WORKS.

The reading and interpretation of selected dramas, poems, letters, historical and philosophical writings will be accompanied by a rapid survey of the whole classical period, with special emphasis on the Storm-and-Stress movement.

Text-books:—

Lyon, *Schillers Leben und Werke* (Velhagen).

Weitbrecht, *Deutsche Literaturgeschichte der Klassikerzeit* (Götschen).

Schiller, *Kabale und Liebe* (Holt), *Die Jungfrau von Orleans* (Ginn), *Wallenstein* (Holt), *Wilhelm Tell* (Holt), *Poems* (Holt), *History of the Thirty Years' War* (Holt).

Tuesday, Thursday and Saturday at 11.

12b. GOETHE'S LIFE AND WORKS.

An outline of the poet's life and time precedes a critical study of his most important dramatic and lyrical productions. (See Departmental regulations, 10, 11).

Text-books:—

Heinemann, *Goethes Leben und Werke* (Velhagen).

Weitbrecht, *Deutsche Literaturgeschichte der Klassikerzeit* (Götschen).

Goethe, *Faust, I* (Hesse), *Iphigenie auf Tauris* (Holt), *Torquato Tasso* (Ginn), *Egmont* (Holt), *Poems* (Holt), *Das Märchen* (Heath), *Novelle, Shakespeare* (Ehlermann).

Monday, Wednesday and Friday at 8.

21b. LESSING'S LIFE AND WORKS.

An outline of Lessing's life and time precedes a critical reading of his most important dramatic, dramaturgic, and philosophical works.

Text-books:—

Löschhorn, *Lessings Leben und Werke* (Velhagen).

Franz, *Hilfsbuch zu Lessing* (Velhagen).

Lessing, *Minna von Barnhelm* (Holt), *Emilia Galotti* (Heath), *Nathan der Weise* (Ginn), *Hamburgische Dramaturgie* (Holt), *Briefe und Abhandlungen* (Velhagen).

Monday, Wednesday, and Friday at 9.

22a. THE GERMAN DRAMA.

The course gives in outline the history and technique of the German drama of the nineteenth century. A number of representative works are studied critically in class.

Text-books:—

Witkowski, *Das deutsche Drama des 19. Jahrhunderts* (Teubner).

Goethe, *Faust* (Hesse).

Grillparzer, *Des Meeres und der Liebe Wellen* (Oxford Press).

Ludwig, *Der Erbförster* (Holt).

Hebbel, *Herodes und Mariamne* (Holt).

Freytag, *Die Journalisten* (Heath).

Hauptmann, *Die versunkene Glocke* (Holt).

Sudermann, *Heimat* (Heath).

Schnitzler, *Anatol* (Fischer).

Monday, Wednesday, and Friday at 8.

23b. THE GERMAN SHORT STORY.

The course gives in outline the history and development of the *Novelle*. A number of representative short stories are studied critically, especially from the point of view of technique.

Text-books:—

Kleist, *Michael Kohlhaas* (Holt).

Keller, *Romeo und Julia auf dem Dorfe* (Holt), *Kleider machen Leute* (Heath).

Meyer, *Gustav Adolfs Page* (Heath).

Riehl, *Die vierzehn Nothelfer* (Ginn).

Storm, *In St. Jürgen* (Heath).

Heyse, *Vetter Gabriel* (Holt), *Der verlorene Sohn* (Wiesbaden).

Baumbach, *Die Nonna* (Heath).

Hoffmann, *Meister Martin der Küfner* (Holt).

Wildenbruch, *Die Rabensteinerin* (Heath).

Monday, Wednesday and Friday at 11.

24b. THE GERMAN LYRIC.

The course gives in outline the history of the German lyric in the nineteenth century. A number of representative poets are studied critically in class, and some of their outstanding poems are committed to memory.

Text-books:—

Spiero, *Geschichte der deutschen Lyrik seit Claudius* (Teubner).

Borinski, *Deutsche Poetik* (Göschel).

Fiedler, *A Book of German Verse* (Oxford Press).

Benzmann, *Moderne deutsche Lyrik* (Reclam).

Bethge, *Deutsche Lyrik seit Liliencron* (Hesse and Becker).

Omitted in 1922-23.

25a. SWEDISH.

The course covers the same ground as the first term of course B, which is outlined above, and includes in addition selections from the second volume of *Svensk Diktning*, edited by Mauritzon and Olson (Augustana Book Concern).

Prerequisite: German A and 1, or their equivalent.

Tuesday, Thursday and Saturday at 10.

26b. DANO-NORWEGIAN.

The course covers the same ground as the second term of course B, and includes in addition Lie's *Selected Stories and Poems* (The Free Church Book Concern).

Prerequisite: Course 25a.

Tuesday, Thursday and Saturday at 10.

31a. SURVEY OF GERMAN LITERATURE.

A course outlining the history of German literature, including its setting in the political and cultural history of the country. Special stress will be laid on the periods from 1750 to the present time. Assigned readings and reports.

Text-books:—

Heinemann, *Deutsche Dichtung* (Kroner).

Thomas, *An Anthology of German Literature* (Heath).

Monday, Wednesday, and Friday at 8.

32a. HISTORY OF GERMANY.

A course outlining the political, social and cultural history of Germany. Assigned readings and reports.

Text-books:—

Kaemmel, *Werdegang des deutschen Volkes* (Reimer).

Müller, *Geschichte des deutschen Volkes*.

Gunther, *Deutsche Kulturgeschichte* (Göschel).

Monday, Wednesday, and Friday at 11.

33b. HISTORY OF THE GERMAN LANGUAGE.

This course outlines the origin and evolution of language in general, and of the Aryan languages in particular. The Germanic family of languages will be stressed, especially Gothic and Old High German. Gothic, as the oldest known member of the family, will be studied philologically in its relation to Low and High German, and these in their relation to each other. For this purpose specimen passages of Gothic, Old Low German, Old High German, Middle High German, and Modern Low German, or Netherlandish, and Scandinavian will be translated into Modern High German.

Text-books:—

Lyon, *Handbuch der deutschen Sprache, II* (Teubner).

Braune, *Gotische Grammatik mit ausgewählten Lesestücken; Althochdeutsches Lesebuch*.

Golther, *Der Nibelunge Nôt* (Göschel).

Marold, *Hautmann von Aue, Wolfram von Eschenbach und Gottfried von Strassburg* (Göschel).

Omitted in 1922-23.

99. READING COURSE for Honour students making German one of their main subjects. Students will choose one of the following:

(a) The Literature of Romanticism.

The following works are read:

Jean Paul, *Leben des Quintus Fixlein* (Cotta).

Tieck, *Ausgewählte Werke* (Hesse).

Hoffmann, *Doge und Dogaresse* (Wiesbaden).

Novalis, *Ausgewählte Werke* (Hesse).

Chamisso, *Peter Schlemihl* (Heath).

Kleist, *Der zerbrochene Krug* (Reclam).

Eichendorff, *Aus dem Leben eines Taugenichts* (Holt).

Fouqué, *Undine* (Holt).

Grillparzer, *Die Ahnfrau* (Holt).

Fiedler, *A Book of German Verse* (Oxford Press).

Walzel, *Deutsche Romantik* (Teubner).

(b) The Literature of Realism.

The following works are read:

Hebbel, *Agnes Bernauer* (Heath).

Freytag, *Soll und Haben* (Ginn).

Fontane, *Grete Minde* (Holt).

Hauptmann, *Vor Sonnenaufgang* (Fischer).

Sudermann, *Der Katzensteg* (Heath).

Schnitzler, *Anatol* (Fischer).

Kretzer, *Meister Timpe* (Fischer).

Freysen, *Jörn Uhl* (Grote).

Bethge, *Deutsche Lyrik seit Liliencron* (Hesse und Becker).

ROMANCE LANGUAGES AND LITERATURE

PROFESSOR—P. G. C. Campbell, M.A. (on leave of absence).

ASSOCIATE PROFESSOR—R. K. Hicks, M.A.

ASSISTANT PROFESSOR—W. M. Conacher, B.A.

FELLOW—Mme McConnell, B.S., C.A.P.

FRENCH

REGULATIONS

1. French 1 is a prerequisite of French 2 and French 2 of all other courses.

2. Pass students making French their Minor subject will take courses 1, 2, 3 and 4. If making French their Major subject they will add 9 a and b.

Note.—For the session 1922-23 course 10 is substituted for 3 and courses 20a, 22b for 4. But 4 is retained for extra-mural students only.

3. Honour students taking French as one of their two Honour subjects, after 1 and 2, will take in the order indicated, 10, 11a, 21b, 13a, 20a, 12b and 16b or 17b or 22b. If the emphasis is laid on French, Reading course 99 will be added.

4. The courses corresponding to former Preliminary Honours are 10, 11a, 21b.

The courses corresponding to former Final Honours are 12b, 13a, 22b, and 20a.

5. Extra-mural instruction is given during the winter of 1922-23 in courses 1, 2, 4, 10, 20a and 21b, and during the summer in 1 and 2. Registration is allowed only in these courses, which will be found marked with an asterisk. Course 11a is open in the summer to students who attend Summer School.

6. Oral examinations must be taken at the University.

COURSES OF INSTRUCTION

FRENCH A. PREPARATORY FRENCH.

This course, intended for those who have not matriculated in French, takes the student up to the standard of the Ontario Pass Matriculation.

Olmsted, *Elementary French Grammar* (Holt).

Lavis, *Histoire de France* (Heath).

Monday, Wednesday, and Friday at 2. Mme McConnell.

***FRENCH 1. FIRST YEAR FRENCH.**

Grammar and composition, study and translation of texts, dictation, oral practice.

NOTE.—The examination in Dictation and Oral Work will take place during the Term in April.

Lavissee, *Histoire de France* (Heath).

Audoux, *Marie-Claire* (Oxford Press).

Fontaine, *En France* (Heath).

Potter, *Dix Contes* (Ginn).

Duhamel and Minssen, *Primer of French Prose Composition* (Rivingtons).

Siepmann, *Short French Grammar* (Macmillan).

Monday, Wednesday, and Friday at 9.

Tuesday, Thursday, and Saturday at 8 (Med), and 9.

Professors Conacher and

***FRENCH 2. SECOND YEAR FRENCH.**

The purpose of this course, which is intended for those who have completed French 1 or its equivalent, is to enable the student to read intelligently and translate accurately, to write French, and to acquire some knowledge of the spoken language. In one of the sections the oral side of the work will be specially stressed.

NOTE.—The oral examination will take place during the term, in April.

Molière, *Le Bourgeois Gentilhomme* (Ginn).

La Fontaine, *Fables* (Dent).

Victor Hugo, *Hernani* (Scott, Foresman).

Daudet, *Tartarin de Tarascon* (Heath).

Zola, *L'attaque du Moulin* (Hachette).

Fontaine, *French Prose Composition* (American Book Comp'y).

Siepmann, *Short French Grammar* (Macmillan),

or (for students intending to take higher courses)

The Wellington College French Grammar (D. Nutt).

Extra-mural students will use, instead of Fontaine's *Composition*, Duhamel and Minssen, *French Prose Composition for Middle Forms* (Rivingtons).

Tuesday, Thursday, Saturday, at 10.

Professors Hicks and Conacher.

***FRENCH 3. THIRD YEAR FRENCH (Pass).**

(Omitted in 1922-23).

***FRENCH 4. FOURTH YEAR FRENCH (Pass).**

Study of specimens of Nineteenth Century Literature. Précis and analyses of texts read. Essays. Critical reading in connection with texts.

Zola, *La Débâcle* (Heath).

France, *Le Livre de Mon Ami* (Holt).

Rostand, *Cyrano de Bergerac* (Holt).

Rousseau, *Selections* (Gauss, Oxford Press).

Goodridge, *French Composition* (Oxford Press).

Extra-mural only in 1922-23.

FRENCH 5b. SCIENTIFIC FRENCH.

(Omitted in 1922-23).

***FRENCH 6. TEACHERS' COURSE.**

(Omitted in 1922-23).

FRENCH 9a and b. Pass Reading Course for those making French their Major.***FRENCH 10. INTRODUCTION TO THE STUDY OF FRENCH LITERATURE.***

Lectures, reports and composition in French, translation into French of critical passages bearing on the literature.

The work of this course is reduced for pass students by the substitution of Kastner and Atkins' for Des Granges' History, and the omission of some of the written reports, etc.

Des Granges et Charrier, *La Littérature expliquée* (Hatier).

Des Granges, *Histoire de la littérature française* (Hatier), or,
for Pass students only,

Kastner and Atkins, *Short History of French Literature* (Holt).

Corneille, *Le Cid* (Ginn).

Zola, *La Débâcle* (Heath).

Victor Hugo, *Poems* (Edgar and Squair, Ginn).

Goodridge, *French Composition* (Oxford Press).

Petit Larousse illustré (Larousse).

Honour course; open also to Pass students in 1922-23.

First term, Professor Conacher; second term, Professor Hicks.

Monday, Wednesday, and Friday at 10.

FRENCH 11 a. PRACTICAL COURSE.

Conversation, composition and prose. Study of maps and pictures.

Assigned readings and reports on France and the French people. Phonetics. The course is conducted in French.

Goodridge, *French Composition* (Oxford Press).

Bascan, *Manuel pratique de prononciation* (Dent).

Barrett Wendell, *La France d'aujourd'hui* (Nelson).

Open only to Honour students.

Tuesday, Thursday, Saturday at 9. Professor Hicks.

FRENCH 12b. FRENCH CONVERSATION AND LINGUISTICS.

Continuation of 11a and 13a. Reports, themes and discussions on French life and institutions. The geography of France. Phonetics. This course is conducted in French.

Barrett Wendell, *La France d'aujourd'hui* (Nelson).

Bascan, *Manuel pratique de prononciation* (Dent).

Kaepelin, *La France et ses Colonies* (Hatier).

Open only to Honour students.

Tuesday, Thursday, and Saturday at 9. Professor Hicks.

FRENCH 13a. FRENCH COMPOSITION AND PROSE. (Advanced course).

The material selected will bear on some topic related to the study of Literature. For 1922-23 this will be the History of France. This course is conducted mainly in French.

Open only to Honour students.

Tuesday, Thursday, and Saturday at 9. Professor Conacher.

FRENCH 14b. OLD FRENCH.

The development of Vulgar Latin into Old French, with emphasis on the stressed vowel and some notice of consonantal change and of the verb-forms. Linguistic study of the *Chanson de Roland*. Other texts will be read from the literary point of view. This course is intended for students proceeding to the degree of M.A.

G. Paris, *La Chanson de Roland* (Ginn).

Baker, *Outlines of French Historical Grammar* (Dent).

*FRENCH 15b. FRENCH CLASSICAL TRAGEDY.

(Omitted in 1922-23).

*FRENCH 16b. ROMANTICISM.

(Omitted in 1922-23).

*FRENCH 17b. REALISM.

(Omitted in 1922-23).

*FRENCH 20a. THE NOVEL.

History of the genre from 1600. Lectures, reports, "explication de textes," individual assignments of critical reading, and a course thesis. Pass students will omit the thesis and part of the assigned reading; they will be examined only on the first four of the required texts.

Levrault, *Le Roman* (Delaplane).

Balzac, *Eugénie Grandet* (Heath).

Quelques contes des romanciers naturalistes (Dow and Skinner, Heath).

A. France, *Le Crime de Sylvestre Bonnard* (Holt).

La Bruyère, *Les Caractères* (Blackie).

Voltaire, *Zadig* (Heath).

Victor Hugo, *Quatre-vingt-treize* (Heath).

Honour course; open also to Pass students in 1922-23.

Monday, Wednesday and Friday at 8. Professor Hicks.

***FRENCH 21b. LITERATURE OF THE CLASSICAL PERIOD.**

Amplification of the first part of course 10, with greater stress on the reading and interpretation of texts. Lectures on special topics. Reports and themes, some of which will be written in French.

Des Granges et Charrier, *La Littérature expliquée* (Hatier).

Des Granges, *Histoire de la littérature française* (Hatier).

Racine, *Britannicus* ((Macmillan).

Molière, *Les femmes savantes* (Holt).

Saint Simon, *Extraits* (les classiques primaires, Hachette).

Open only to Honour students.

Tuesday, Thursday, and Saturday at 9. Professor Conacher.

FRENCH 22b. LITERATURE OF THE NINETEENTH CENTURY.

Amplification of the second part of course 10, with greater stress on the reading and interpretation of texts. Lectures, reports and themes. Special reading and a course thesis for Honour students. Pass students will use Kastner and Atkins' in place of Des Granges' History of Literature, and will substitute translation into French for the reports and themes.

Des Granges et Charrier, *La Littérature expliquée* (Hatier).

Des Granges, *Histoire de la littérature française* (Hatier), or
for Pass students only,

Kastner and Atkins, *Short History of French Literature* (Holt).

Rousseau, *Selections* (Gauss, Oxford Press).

Chateaubriand, *Atala, René* (Nelson).

Augier, *Le gendre de M. Poirier* (Macmillan).

Hémon, *Maria Chapdelaine* (Grasset).

And, for Pass students only,

Goodridge, *French Composition* (Oxford).

Honour course; open also to Pass students in 1922-23.

Monday, Wednesday, and Friday at 8. Professor Hicks.

FRENCH 23. THE NOVEL.

Expansion of course 20a. Open only to candidates for M.A. degree. Extra-mural only in 1922-23.

FRENCH 99 a and b. HONOUR READING COURSE for those taking their reading course in French. Students may select one of the following options or arrange with the Department some equivalent course: The Social Life of the 17th Century; The Novel in the 18th Century; The causes of the French Revolution; French Canadian Literature; Les Chansons de Geste.

SPANISH AND ITALIAN LANGUAGES AND LITERATURE

PROFESSOR—J. H. Brovedani, D-ès-L.

TUTOR—Mildred E. Hallett, B.A.

SPANISH

REGULATIONS

1. Spanish A may be counted towards a degree and towards a Minor or a Major or Honours under conditions specified in section 9 of **GENERAL REGULATIONS**.

2. Courses numbered under 10 are open to Pass students only. Courses numbered from 10 to 20 are open to Pass and Honour students. Courses numbered over 20 are open to Honour students only.

3. Spanish A is a prerequisite to Spanish 1 and Spanish 1 is a prerequisite to all other courses.

4. The Minor consists of courses A, 1 (1, 2 for students entering with Spanish Matriculation), 15, 16a, and 17b.

5. The Major consists of courses A, 1 (1, 2 for students entering with Matriculation in Spanish), 15, 16a, 17b, and 9. Italian 1, with the consent of the Department, may be substituted for one of the lecture courses.

6. Honours consist of A, 1, and four or five courses from those numbered 10 to 99, except for those students entering with Matriculation in Spanish for whom 1, 2 and three to five courses from those numbered 10 to 99 are required. Italian 1, with the consent of the Department, may be substituted for one of the lecture courses. All Honour students in Spanish must take 15, 22a, and 23b.

7. Students in commercial courses will take A, 1, or A, 1 and 6.

8. Students completing their work under the old system of studies will take courses 15, 26a and 27b, for Preliminary Honours and courses 22a, 23b, 24a and 25b for Final Honours.

9. Extra-mural instruction is limited to courses A, 1, 2, 6, and 15, which are marked with asterisks. Of these, only Spanish A and 1 are given in the summer session.

10. Reference Books:

DICTIONARIES: Velázquez, *English-Spanish* (Appleton), or Cuyás, *English-Spanish* (Appleton), which is less expensive. Honour students are strongly recommended to use also *Pequeño Larousse*, written entirely in Spanish, and *El Diccionario de la Academia*.

GRAMMARS: For First and Second year Students: Ramsay, *Book of Modern Spanish*. For advanced students: Bello-Cuervo, *Gramática Castellana* (R. Roger & F. Chernovis, Paris), one of the best Grammars written entirely in Spanish, and Pidal, *Gramática Histórica*.

PRONUNCIATION: Moreno-Lacalle, *Elements of Spanish Pronunciation* (Sanburn). Navarro-Tomás, *Pronunciación Española* (Centro Estudios Históricos, Madrid) the best work of its kind, indispensable for students taking Specialist Course.

HISTORY OF LITERATURE: Fitzmaurice-Kelly, *History of Spanish Literature*. There is also a Spanish edition of this work with an up-to-date bibliography. Mérimée, *Histoire de la littérature Espagnole* (Garnier Frères, Paris), and Salcedo, *Literatura Española* (Casa Editorial Calleja, Madrid).

SPAIN AND ITS PEOPLE: Richard Ford, *The Handbook for Travelers in Spain*, London (John Murray, 8th edition, 1892). There is also an Everyman's edition of the same work entitled Ford's *Gatherings from Spain*.) George Borrow, *The Bible in Spain* (Dent), T. Gautier, *Voyage en Espagne*, E. de Amicis, *Spain and the Spaniards* (Putnam), are classics with which every student of Spanish must be acquainted. Havelock Ellis, *The Soul of Spain* (Houghton Mifflin Co.), S. L. Bensusan, *Home Life in Spain* (Macmillan), J. B. Trend, *A Picture of Modern Spain* (Houghton Mifflin Co., 1921), are good modern works on this subject.

COURSES OF INSTRUCTION

*SPANISH A. ELEMENTARY SPANISH.

Grammar, Composition, Translation, Reading and oral exercises.

Prescribed texts:

Moreno Lacalle, *Elementos de Español* (Sanborn).

Spanish Reader, to be announced at the beginning of the session.

Tuesday, Thursday, and Saturday at 9.

*SPANISH 1. INTERMEDIATE SPANISH.

Prerequisite—Spanish Matriculation, or Spanish A.

Grammar, Composition, Translation, Conversation and Study of the following prescribed texts:

Hills, *Spanish Tales* (Holt).

Luquiens, *Spanish American Reader* (Macmillan).

Quintero, *Mañana de Sol* (Heath).

Cool, *Spanish Composition* (Ginn).

Ford, *Spanish Composition* (Heath).

Monday, Wednesday, and Friday at 10.

***SPANISH 2. ADVANCED SPANISH.**

Only for students who have entered with Spanish Matriculation and have also passed Spanish 1.

The time-table will be arranged by consultation at the beginning of the session.

SPANISH 6. COMMERCIAL SPANISH. Prerequisite, Spanish 1.*SPANISH 9. READING COURSE for Pass students.*****SPANISH 15. MODERN SPANISH LITERATURE AND COMPOSITION.**

Prescribed texts:

Valdés, *La Hermana San Sulpicio* (Holt).

Galdós, *Marianela* (Heath).

Martínez de la Rosa, *La Conjunción de Venecia* (Sanborn).

Benavente, *Sin Querer* (Heath).

De pequeñas causas (Heath).

Quintero, *Doña Clarines* (Heath).

Hills and Morley, *Spanish Lyrics* (Holt).

Cool, *Spanish Composition*, Lessons 14-28.

Remy, *Spanish Composition* (Heath).

The Prescription of additional work for Honour students will be announced later.

The time-table will be arranged by consultation at the beginning of the session.

SPANISH 16a. DON QUIXOTE; ADVANCED COMPOSITION.

Prerequisite—Spanish 15.

SPANISH 17b. LOPE AND CALDERON; ADVANCED COMPOSITION.

Prerequisite—Spanish 15.

SPANISH 22a. CERVANTES.**SPANISH 23b. THE DRAMA IN THE GOLDEN AGE.****SPANISH 24a. THE ROMANTIC PERIOD.****SPANISH 25b. LYRIC POETRY FROM THE MIDDLE OF THE 19TH CENTURY.**

SPANISH 26a. THE NOVEL FROM 1868.

SPANISH 27b. CONTEMPORARY DRAMA.

SPANISH 28b. SPANISH-AMERICAN LITERATURE.

SPANISH 29a. SPANISH RENAISSANCE.

SPANISH 99. READING COURSE FOR HONOUR STUDENTS.

ITALIAN

REGULATIONS

1. With the consent of the Department students taking Honours or a Major in Spanish may substitute Italian 1 for one of their lecture courses in Spanish.

2. Students may not count more than two courses for a degree but Italian 10 or 11 may be offered instead of Italian 2.

3. Italian 1 is a prerequisite to Italian 2, and Italian 2 or 1st division Italian 1, is a prerequisite to all other courses.

4. No extra-mural instruction is offered in Italian.

COURSES OF INSTRUCTION

ITALIAN 1. ELEMENTARY ITALIAN.

Oral Exercises, Dictation, Grammar, Composition.

Reading of extracts from Modern Italian authors.

Reading and translation of Castelnovo, *O bere o affogare* and *Lumie di Sicilia*.

The time-table will be arranged by consultation at the beginning of the session.

ITALIAN 2. ADVANCED ITALIAN.

Conversation, Composition, Study of Wilkins and Altrocchi, *Italian Short Stories*; translation and literary study of Goldoni, *La Locandiera*, and of Modern Italian poetry to be announced at the beginning of the session.

ITALIAN 10. MEDIO EVO E RINASCIMENTO.

Dante, Boccaccio, Ariosto, Tasso.

ITALIAN 11. ETÀ MODERNA.

Goldoni, Parini, Alfieri, Monti, Foscolo, Manzoni, Leopardi, Carducci.

ENGLISH LANGUAGE AND LITERATURE

PROFESSOR—Thomas Seccombe, M.A.

PROFESSOR—J. F. Macdonald, M.A.

ASSISTANT PROFESSOR—James A. Roy, M.A.

INSTRUCTOR—Wilhelmina Gordon, M.A.

LECTURER—Horace M. Reynolds, M.A.

TUTORS—Helen de Renzy.

Annie F. Robinson, B.A.

B. C. Diltz.

Norman Campbell.

R. H. Wallace.

REGULATIONS

1. English 1 and 2 are required of all candidates for a degree in Arts. English 1 is a prerequisite to English 2, and English 2 is a prerequisite to all other courses, though one or more of the following may be taken concurrently with it: 4a, 6b, 8a, 10a, 14b, 20b.

2. Students making English their Minor subject must take courses 1 and 2 and four half-courses.

3. Students making English their Major subject must take English 9 a-b in addition to the work prescribed for a Minor.

4. Students making English one of their two Honour subjects must take from six to ten half-courses in addition to courses 1 and 2. If English 1 is allowed on Honour matriculation, English 4a or 6b may be included among the optional half-courses, but otherwise no course numbered under 10 may be counted towards Honours. All Honour students in English must take 10a and 14b, one of 18a, 20b, 22a, 24b, and one of 27a, 29b, 36b, 42a, 44b. Those who regard English as their main subject must include 99 a-b.

5. Intra-mural students completing their work according to a former Calendar will take 10a for Anglo-Saxon, any four half-courses numbered above 10 for Preliminary Honours, and four other half courses in this group, including 14b, for Final Honours.

6. Extra-mural instruction is limited to the following courses, marked below with an asterisk: 1, 2, 4a, 10a, 14b, 18a, 20b, 22a, 24b, 27a, 29b. Of these, only English 1 and 2 are regularly given in the summer session. In the summer of 1922, however, extra-mural work will be offered in 18a, 27a, 20b, 29b.

COURSES OF INSTRUCTION

***ENGLISH 1. COMPOSITION AND LITERATURE.**

A practical course in Composition, with collateral reading. *Selected English Essays, Selected Short Stories* (Numbers 2 and 228 in the World's Classics Series), and Shakespeare's *Twelfth Night*.
Tuesday, Thursday, and Saturday at 8.

***ENGLISH 2. GENERAL SURVEY OF ENGLISH LITERATURE.**

The course is intended to provide a general knowledge of the history and development of English Literature, and to lay a foundation for the advanced specialized courses. It deals with the principal types of English verse; with various literary forms, such as the ballad, sonnet, epic, and drama; and with great writers, great books, and great movements. This part of the work will be based on Moody and Lovett's *History of English Literature* (or Strong's *Short History of English Literature*), and Manly's *English Prose and Poetry*. In addition the following texts will be carefully studied in the class-room: Chaucer's *Prologue* (lines 1-207, 285-360, 477-528), Shakespeare's *Hamlet*, Milton's *Paradise Lost* (Book I), Thackeray's *Vanity Fair*.

Section A. Monday, Wednesday, and Friday at 9.

Section B. Tuesday, Thursday, and Saturday at 9.

***ENGLISH 4a. COMPOSITION.**

Lectures on the principles of effective writing. Practice in the writing of Exposition, Argument, Description, and Narration. The study of illustrative passages from the best writers. See paragraphs 1 and 4 above. This course is not open to students who have taken English 1.

Tuesday, Thursday, and Saturday at 10. First term, Miss Gordon.

ENGLISH 5b. HEBREW LITERATURE IN ENGLISH TRANSLATION.

A study of the origin and nature of this literature from 1100 to 100 B.C. Special attention in this outline will be given to the ancient stories and the poetical literature.

Text-books: *The Life and Literature of the Ancient Hebrews* by Lyman Abbott. Gunkel's *Legends of Genesis*.

Books of Reference: *The Literary Study of the Bible* by R. G. Moulton. Kautzsch's *Outline of Hebrew Literature*.

Tuesday, Thursday, and Saturday at 11. Second term.

Professor Jordan.

ENGLISH 6 hf. DEBATING.

Lectures will be given on the principles of Argumentation, but the work of the class will consist chiefly of practical training in debating. Speeches will be criticised from the point of view of matter, organization, phrasing, and delivery. See paragraphs 1 and 4 above.

ENGLISH 8a. PUBLIC SPEAKING.

Voice control; platform practice; the conduct of deliberative assemblies.

ENGLISH 9 a-b. READING COURSE FOR PASS STUDENTS taking English as a Major.

*ENGLISH 10a. ANGLO-SAXON.

Outlines of Anglo-Saxon Grammar. Translation and study of the following passages from Bright's *Anglo-Saxon Reader*: Account of the Poet Caedmon, Wars of Alfred the Great, Preface to the *Cura Pastoralis*, the Voyages of Ohthere and Wulfstan, the Conversion of Edwin, Assumption of St. John the Apostle (three pages), the Offering of Isaac, the Battle of Maldon (ll. 244-325).

Beowulf, ll. 320-370, 711-791, 1558-1651.

Open only to Honour students. Monday, Wednesday, and Friday at 8.

[ENGLISH 11b. BEOWULF. Omitted 1922-1923.]

*ENGLISH 14b. CHAUCER.

A study of Chaucer's development as a poet based on a general knowledge of the following poems: *The Romaunt of the Rose*, *The Book of the Duchesse*, *The Parlement of Foules*, *Troilus and Criseyde*, *The House of Fame*, *Prologue to the Legend of Good Women*, *The Canterbury Tales*. A detailed study of the *Prologue to the Canterbury Tales* and *The Nonne Preestes Tale*. *The Works of Chaucer* (Oxford University Press).

Open only to Honour students.

Monday, Wednesday, and Friday at 8.

*ENGLISH 18a. SHAKESPEARE.

A study of Shakespeare's development as a dramatist, involving a general knowledge of *The Two Gentlemen of Verona*, *The Comedy of Errors*, *Titus Andronicus*, *Romeo and Juliet*, *King Henry IV*, *Julius Caesar*, and *The Tempest*; and a detailed knowledge of *Twelfth Night*, *Othello*, and *King Lear*.

Additional work for Honour students: Wynne's *The Growth of English Drama*, Marlowe's *Dr. Faustus*, Kyd's *The Spanish Tragedy*.

Monday, Wednesday, and Friday at 11.

*ENGLISH 20b. NON-DRAMATIC LITERATURE FROM SPENSER TO MILTON.

The following subjects will be discussed: Social, political and literary conditions in the later 16th century; the Elizabethan lyric; the poetry of Spenser; Elizabethan literary criticism; the poetry of Milton; the 17th Century lyric. The following poems will be studied in detail: Spenser, *The Shepherd's Calendar*, *The Four Hymns*, *Prothalamion*, *Epithalamion*, *The Faerie Queene*, Book I;

Milton, *Lycidas*, *Comus*, *Paradise Lost*, *Samson Agonistes*, and various 17th Century lyrics.

Students taking this class for Honours will be assigned special essays, and will be examined on the following additional reading: the Elizabethan Sonnet, including Shakespeare's sonnets; Milton, *On the Morning of Christ's Nativity*, the Sonnets, some of the Prose Works, *Paradise Regained*; additional 17th Century lyrics.

Tuesday, Thursday, and Saturday at 10. Miss Gordon.

***ENGLISH 22a. THE EIGHTEENTH CENTURY.**

The chief literary movements from 1660 to 1798 will be studied.

The following texts will be read:

Dryden's *Absalom and Achitophel*; Pope's *Moral Essays*, I and III; Prior; Gay; Chesterfield; H. Walpole; Johnson's *Vanity of Human Wishes*; Cowper's *Task*, Book I; Swift's *Gulliver's Travels* and *Journal to Stella*; Johnson's *Lives* of Pope, Collins and Gray; Boswell's *Life of Johnson* (the events of 1773); selected letters of Gray and Cowper; Thomson's *Winter*; selected poems of Collins, Gray and Burns.

Additional reading for Honour students: Dryden's *Preface* to his *Fables*; Pope's *Imitations of Horace*; Swift's *A Tale of a Tub*; Gibbon's *Decline and Fall of the Roman Empire* (chapters 37 and 58); Burke's *Speech on Conciliation with the Colonies*; selected letters of Lady Mary Wortley Montague, Pope, Swift, Walpole, Burns, Chesterfield.

Tuesday, Thursday and Saturday at 9.

***ENGLISH 24b. THE ROMANTIC REVIVAL.**

Lectures on English Poetry from 1786 to 1824. A general knowledge of the following texts will be required:

Wordsworth: *The Prelude*; *The Excursion*, Book I; *Lyrical Ballads* (1800); *The Preface to Lyrical Ballads*. Scott: *Marmion*. Crabbe: *The Borough*. Byron: *The Prisoner of Chillon*; *The Bride of Abydos*; *Childe Harold*, Book III. Keats: *Sleep and Poetry*; *Isabella*; *The Eve of St. Agnes*; *Lamia*; *Hyperion*; *The Odes*. Shelley: *Alastor*; *Prometheus Unbound*.

Additional reading for Honour students: Coleridge: *Biographia Literaria* (Chapters XIV—XXII). Keats: *Letters*. Shelley: *A Defence of Poetry*. Jeffrey: *Essays on Keats and Wordsworth*.

Tuesday, Thursday, and Saturday at 9.

***ENGLISH 27a. NINETEENTH CENTURY PROSE.**

A study of the main movements in nineteenth century thought, with special attention to the work of Carlyle, Ruskin, Arnold, the Oxford School, Newman, Froude, Mill, Macaulay, insurgents against material progress, such as Borrow, FitzGerald, Morris, George Eliot, Meredith, Hardy, Lang, Lockhart, Robert Louis Stevenson, Stephen, Butler, Wells, Gissing, and other writers in short selections.

Open only to Honour students.

Tuesday, Thursday, and Saturday at 11.

***ENGLISH 29b. VICTORIAN AND LATER POETRY.**

A rapid survey of the main movements in nineteenth century poetry, with detailed study of a considerable part of the poetry of Tennyson, Fitzgerald, Browning, Arnold, Clough, Mrs. Browning, the Rossettis, Swinburne, Meredith, and Kipling. In addition there will be lectures on twentieth century writers and prescribed reading from their works.

Additional work for Honour students will be announced at the beginning of the session.

Tuesday, Thursday, and Saturday at 11.

ENGLISH 36b. THE DRAMA FROM 1660 TO THE PRESENT.

A study of the development of the English Drama based upon representative plays by Dryden, Otway, Congreve, Steele, Goldsmith, Sheridan, Byron, Jones, Pinero, Shaw, Galsworthy, Synge, Barrie, and others.

Open only to Honour students.

Monday, Wednesday, and Friday at 9.

ENGLISH 42a. HISTORY OF ENGLISH CRITICISM.

Introductory:—On the meaning and function of criticism. Brief survey of Greek Criticism before Aristotle, Aristotle's *Poeticus*, Longinus *On the Sublime*, Latin Criticism, Quintilian's *Institutes*, Mediaeval Criticism, Dante's *De Vulgari Eloquentia*, Renaissance Criticism, The *Pléiade*.

Elizabethan Criticism, The Neo-Classic Creed, Dryden and his contemporaries, Addison to Johnson, the Dissolvents of Neo-Classicism, Lessing, the precursors of the Romantic Revolt in England, the restatement of Criticism, Wordsworth and Coleridge, the Occult School, Hazlitt, English Criticism between Coleridge and Arnold, English Criticism between 1860 and 1900, Matthew Arnold. Knowledge of the following texts will be necessary: Sidney's *Defence of Poesy*; Dryden's *Defence of Dramatic Poesy* and other critical essays; Addison's critical writings;

Lives of the Poets; Wordsworth's Prefaces and the Criticism of Coleridge, Lamb, Hazlitt, Arnold and Pater.

Open only to Advanced Honour Students.

Monday, Wednesday, and Friday at 9.

ENGLISH 44b. INTRODUCTION TO ENGLISH PERIODICAL LITERATURE, ESPECIALLY OF THE 19TH CENTURY.

Lectures on The End of the Censorship 1695. Growth of Coffee-Houses, News-letters, News-papers, L'Estrange and Defoe, *Tatler and Spectator*, *Gentleman's Magazine*, *Monthly and Critical Reviews*, genesis and predominance of *Edinburgh and Quarterly Reviews*, *The Westminster*, *Blackwood*, *London Magazine*, *Retro-spective*, *Frasers*, *New Monthly*, *Cornhill*; *The Atlantic Group*, *The English-Speaking World*, *The Times*, *Literary Magazines*, *The Athenaeum*, *Mercury*, etc.

Open only to advanced Honour students.

Tuesday, Thursday, and Saturday at 11.

ENGLISH 99a-b. READING COURSE FOR HONOUR STUDENTS.

The progress of the novel in England from Nash and Bunyan to Wells and Galsworthy.

HISTORY

PROFESSOR OF HISTORY AND DOUGLAS PROFESSOR OF COLONIAL HISTORY—

J. L. Morison, M.A., D.Litt., F. R. Hist. S., F.R.S.C.

ASSOCIATE PROFESSOR OF EUROPEAN HISTORY—

J. T. McNeill, M.A., B.D., Ph.D.

ASSISTANT PROFESSOR—A. E. Prince, M.A.

REGULATIONS

1. There are five and a half Pass courses in this subject, viz., History 1, 2, 3, 4, 5a, and 16. Students taking only one or two courses must select from History 1, 2, 3. Reading courses for Pass men will be found under History 9.

2. There are five Honours courses, viz., History 12, 13, 14b, 15a, 16, 20a, and 21b. History 16 (English Constitutional History) may be taken as an Honours course by those who add the study of select Latin Charters to the Pass prescription. Reading courses for Honours students will be found under History 99.

3. Normally a student taking a Major in History will choose four courses from History 1, 2, 3, 4 and 16, with a reading course selected from History 9. But he is at liberty to substitute for one of the lecture courses History 12, or 13, provided that he takes unmodified the ordinary Honours examination in these courses.

4. Students reading for honours must take from 5 to 7 full courses, or their equivalent, including 1 or 16, 2 or 3, 12 and 13. Certain honours classes, e.g. 20a and 21b, have been marked as advanced. These may be taken by students reading for the degree of M.A. (See further under regulations for M.A.).

5. Students completing their work under the former system of studies will take any two of History 12, 13, and 16 for Preliminary Honours and History 14b, 15a, 20a, and 21b for Final Honours.

6. Cases in which students may desire to modify the order of the courses arranged above will be considered by the professors in the department.

7. A knowledge of historical geography is required in all classes. The most accessible atlases are:

Ramsay Muir, *Philips' New Historical Atlas for Students* (Geo. Philips & Son).

The Everyman *Literary and Historical Atlas of Europe* (Dent).

E. W. Dow, *Atlas of European History* (Holt & Co.).

F. W. Putzger, *Historischer Schul-Atlas* (Leipzig).

8. Any half-courses in the department of Economics which deal with economic history or constitutional law and practice may be counted as half-courses in History. But in all such cases, the student will consult the Professor of History.

9. All the courses in History are open to extra-mural students in the winter session, but those desiring to take 14b, 15a, 20a, and 21b, must satisfy the Department that they have ready access to libraries containing volumes relevant to the courses chosen.

In the summer of 1922 History 2, 12, and 15a will be offered extra-murally, in addition to research work for M.A. and Ph.D. to be conducted by Professor Morison at the Dominion Archives, Ottawa.

COURSES OF INSTRUCTION

HISTORY 1. BRITISH HISTORY, 1603-1885.

The lectures will discuss such topics as the following:

The beginnings of colonial settlement; the clash between prerogative and parliament; the Puritan revolution and the republican experiment under Cromwell; the Stuart Restoration and the Whig reaction of 1688; the development of party government; Imperial expansion and contraction; eclipse of the Whigs; the French Revolution and domestic reaction; the industrial revolution; middle-class Parliamentary reform; free trade; Chartism and the influence of the revolutionary nationalist movements in Europe on the growth of democracy; Victorian optimism; the Near Eastern question; Conservatism and Liberalism; the rise of modern Imperialism.

The general text-book prescribed for the course will be J. R. Green's *Short History of the English People*. In addition students will be expected to read the following: G. M. Trevelyan's *England under the Stuarts*; G. G. Robertson's *England under the Hanoverians*, and J. A. R. Marriott's *England Since Waterloo*.

Tuesday, Thursday, and Saturday at 11.
Professor Prince.

HISTORY 2. EUROPEAN HISTORY FROM THE RENAISSANCE TO THE CONGRESS OF VIENNA—1453-1815.

The following subjects will be discussed in the lectures: The Italian and trans-Alpine Renaissance; the Spread of the Reformation; the Hapsburg Ascendency; the Thirty Years' War; the French Ascendency; the Rise of Prussia; the Rise of Russia; the Partitions of Poland; the Enlightenment and the Enlightened Despots; the French Revolution; the Napoleonic Era.

Hayes, *Political and Social History of Modern Europe*, Vol. I. (Macmillan).

Fisher, *Napoleon* (Home University Library, Williams & Norgate).

Tuesday, Thursday, and Saturday at 9.

Professor J. T. McNeill.

HISTORY 3. COLONIAL HISTORY.

Lectures will be given on the general course of Colonial Development down to 1783. These will treat of the trade routes of the Old World; the voyages of discovery; the growth of theories of colonization; Spain, France, and England in America, and the reaction of the new world upon the old; the Old Colonial system and its breakdown after the Seven Years' War; the American Revolution. Some of the more significant phases of the history of Canada between 1763 and 1841 will be discussed.

Cheyney, *European Background of American History*.

Bourne, *Spain in America*.

Becker, *Beginnings of the American People*.

Lucas, *New France*.

Grant, *History of Canada*.

Monday, Wednesday, and Friday at 11.

Professor Morison.

HISTORY 4. GREEK AND ROMAN HISTORY.

By arrangement with the Professor of Greek, students taking this course will register in Greek 10a and Latin 10b, under which headings the details of the work may be found.

Tuesday, Thursday, and Saturday at 10.

HISTORY 5a. HEBREW HISTORY.

A short sketch of the history of ancient Egypt and Babylonia as an introduction to the study of the origin of the Hebrew people and the rise of the Kingdom. Hebrew history down to the beginning of the Roman rule in Palestine, special attention being given to the conflict between the Hebrew and Greek civilizations after the time of Alexander the Great.

Works of reference: *History of the Egyptians* by J. H. Breasted; *History of the Babylonians and Assyrians* by G. S. Goodspeed.

Text-books on the History of the Jewish People:

The Babylonian, Persian and Greek Periods by C. F. Kent.

The Maccabean and Roman Period by J. S. Riggs.

Students selecting this Course will consult Professor Jordan.

Tuesday, Thursday, and Saturday at 11.

HISTORY 9. Pass students taking their Major in History will select for a Reading course one of the following options:

DEPARTMENTAL PRESCRIPTIONS

- (a) Lord Macaulay, *History of England* (Everyman's Library, 3 vols.); Trevelyan, *Life and Letters of Lord Macaulay* (Nelson, 2 vols.).
- (b) Gibbon, *Decline and Fall of the Roman Empire* (Everyman's Library, 6 vols.).
- (c) The Renaissance in Italy: Symonds, *The Italian Renaissance*; Villari, *Life and Times of Savonarola*, and *Life and Times of Machiavelli*; Burckhardt, *The Renaissance in Italy*; Machiavelli, *The Prince*.
- (d) Great Explorers: *Henry the Navigator* (Heroes of the Nations); Christopher Columbus, *Journal*; Froude, *English Seamen of the Sixteenth Century*; Parkman, *La Salle*; Blaikie, *Personal Life of David Livingstone*.

HISTORY 12. EUROPEAN HISTORY FROM THE FALL OF THE WESTERN EMPIRE TO THE FALL OF THE EASTERN EMPIRE, 476-1453.

The following subjects will be discussed in the lectures:—The Decline of Roman Civilization and Government in the West; the Barbarian Invasions; the Germanic Kingdoms; Monasticism, the Papacy, and the Expansion of the Church; the Rise of the Frankish Empire; Celtic and Anglo-Saxon Missionaries and Scholars; the New Invaders—Norsemen, Magyars, Saracens; the Holy Roman Empire; the Capetian Monarchy; Cluny, Hildebrand, and the Investiture Controversy; Feudalism, Chivalry, the Crusades; Towns and Economic Development; the Universities, the Friars, the Scholastics; the Conciliar Movement; the Dawn of the Renaissance.

Thorndike, *History of Mediaeval Europe* (Houghton, Mifflin & Co.).

Note:—In essays and seminar classes students will be introduced to a number of mediaeval documents, mainly in translation. Thatcher and McNeal, *Source-Book of Mediaeval History*, and the Pennsylvania Translations and Reprints, will be utilized.

Monday, Wednesday, and Friday at 9.

Professor J. T. McNeill.

HISTORY 13. IMPERIAL AND INTERNATIONAL PROBLEMS.

The object of this class is to discuss the earlier history of some of the more important imperial and international problems of the day. The topics change from year to year. For 1922-23 the subject is *Two studies of National Developments within the British Empire*.

- (i) Irish History from the Union to the creation of the Free State. The lectures will deal with:—The Union of 1800; the career of Daniel O'Connell; Davis and Young Ireland; the Land Question; Parnell, Gladstone, and Home Rule; later national developments down to the present day.

Lecky, *Leaders of Public Opinion in Ireland*, vol. ii (Daniel O'Connell).

Barker, *Ireland in the Last Fifty Years*.

- (ii) India under British rule, from Warren Hastings to the Montague-Chelmsford Reforms.

The lectures will deal with: Hastings and Edmund Burke; the work of Wellesley; the Lawrence School and the completion of dominion; the Mutiny and after; the growth of nationalist feeling; India under Curzon, Minto and Morley; the Great War, the Hindu and Mohammedan movements, and the experiment in Indian self-government.

Lyall, *Rise of the British Dominion in India*; or,

Smith, *The Oxford History of India*, pp. 523 to the end.

Chirol, *India Old and New*.

Indian Constitutional Reforms (H. M. Stationary Office).

Monday, Wednesday, and Friday at 10.

Professor Morison.

HISTORY 14b. THE AGE OF ELIZABETH.

Amongst the subjects discussed in the lectures are: The Reformation under Edward VI; the return to Catholicism under Queen Mary; Elizabeth's ecclesiastical "middle way"; psychological comparisons between the three Queens, Mary Tudor, Mary Queen of Scots, and Elizabeth; John Knox and the Reformation in Scotland; Elizabeth's diplomacy and her rivalry with Mary Queen of Scots; Mary in England and the Catholic Revival; English maritime activities and the Tudor Navy; Philip II and the Spanish Armada; colonial and commercial progress; social and economic development; the Irish problem under the later Tudors; the "Age of Shakespeare"; the beginnings of Puritanism and Parliamentary resistance to autocracy.

M. Creighton, *Age of Elizabeth*.

E. S. Beesley, *Queen Elizabeth*.

Machiavelli, *The Prince*.

W. Raleigh, *Discovery of Guiana* (Blackie's Texts).

W. Harrison, *Elizabethan England* (Scott Library).

Monday, Wednesday, and Friday at 11.

Professor Prince.

HISTORY 15a. EUROPE SINCE THE CONGRESS OF VIENNA, 1815-1922.

The following subjects will be discussed in the lectures:—
The Confederation of Europe; the Metternich System; Liberal and republican movements; the second French Empire; the Unification of Italy; the Expansion of Russia; the Franco-Prussian War; the Near Eastern Question and the Congress of Berlin; Imperial Germany; the third French Republic; Austria and Russia at the end of the century; the Great War and the New Nations.
Text Books:

Turner, *Europe, 1789-1920* (Doubleday, Page & Co.).

As an introduction to the course students should read J. H. Rose, *Nationality in Modern History* (Macmillan). J. H. Robinson and C. A. Beard, *Readings in Modern European History*, Vol. II (Ginn and Co.), and Oakes and Mowatt, *Great European Treaties of the Nineteenth Century* (Oxford Press), will be used for reference and should be procured by extra-mural students.

Monday, Wednesday, and Friday at 11.

Professor J. T. McNeill.

HISTORY 16. THE DEVELOPMENT OF ENGLISH INSTITUTIONS AND LAW TO 1485.

An introductory study of the growth of the parliamentary, administrative, ecclesiastical, and legal system of England up to the end of the Middle Ages. The subjects discussed will include the following: The origins and growth of the Anglo-Saxon Constitution; Feudal Institutions and Land Law; the organization of the Judicature; the evolution of Parliament; the development of administration; and the work of the Chancery, Exchequer, Wardrobe, and Household, etc.; the mediaeval Church system; the Lancastrian Constitutional Experiment; the development of autocratic government.

D. J. Medley, *Student's Manual of English Constitutional History*, or

F. W. Maitland, *Constitutional History of England*.

This course is open to both Pass and Honours students; but the latter will be required to study certain documents in W. Stubbs' *Select Charters* or D. J. Medley's *Original Illustrations of English Constitutional History*.

Tuesday, Thursday, and Saturday at 8.

HISTORY 20a. THE BASES OF FRENCH CANADIAN NATIONALITY: a study of French civilization in Canada in the seventeenth and eighteenth centuries.

This is an advanced class, and may be offered as part of the work for the degree of M.A. It will deal with: The French institutions

in Church and State transferred to Canada in the 17th century; the Jesuit missions; Laval, and the Roman Catholic Church in Canada; Louis XIV and the colonial policy of Colbert; Talon and Royal control; French feudalism in Canada; the French-Canadian people in 1759.

Munro, *The Seigniorial System in Canada*.

Parkman, *The Jesuits in North America*, and *The Old Régime*.

Chapais, *Le Marquis de Montcalm*.

Books of reference on French History (1600-1763):

Grant, *The French Monarchy*.

Lavisse, *Histoire de France*, tomes 6-8.

Lodge, *Richelieu*.

Cambridge Modern History, vol. 5, The Age of Louis XIV.

Tuesday, Thursday, and Saturday at 10.

HISTORY 21b. FRENCH AND BRITISH IN CANADA—THE FIRST PHASE, 1763-1818.

This is an advanced class and may be offered as part of the work for the degree of M.A. It will deal with: The first days of British rule; the administrations of Dorchester; the United Empire Loyalists; the war of 1812; the French community under the new regime; the various constitutional experiments and agitations; British Colonial policy under George III.

Lucas, *A History of Canada, 1753-1812*.

Doughty & Shortt, *Documents relating to the Constitutional History of Canada, 1759-91*.

Doughty & Macarthur, *Documents relating to the Constitutional History of Canada, 1791-1818*.

Chapais, *Cours d'histoire du Canada*.

Books of reference:

Canada and Its Provinces, vol. 3.

Bradley, *Lord Dorchester*.

Tuesday, Thursday, and Saturday at 10.

HISTORY 99. Honour students taking their Reading course in History will select one of the following options or will arrange with the department some equivalent course on an historical subject in which they wish to specialize.

(a) Francis Parkman, *History of the French in Canada*; Chapais, *Le Marquis de Montcalm*.

(b) Confederation in Canada. This will involve a knowledge of the biographies of the Canadian leaders, Macdonald, Cartier, Brown, Galt and Howe, together with a study of official printed matter, of which *Confederation Debates* is the most obvious example.

- (c) Napoleon: For introduction read J. Holland Rose, *Life of Napoleon I*, and Vandal, *L'Avènement de Bonaparte*, 2 vols.; then study Roper, *The Waterloo Campaign*, and Rosebery, *The Last Phase*.
- (d) The Unification of Italy: Thayer, *Cavour*; G. M. Trevelyan, *Garibaldi's Defence of the Roman Republic*, *Garibaldi and the Thousand*, *Garibaldi and the Making of Italy*, *English Songs of Italian Freedom*; Mazzini, *Essays* (Everyman).
- (e) The Celtic Element in Mediaeval Culture; Bury, *Life of St. Patrick*; Fowler, *Adamnan's Life of St. Columba*; Jones, *Life of St. Columban*; Zimmer, *Irish Element in Mediaeval Culture*.

POLITICAL AND ECONOMIC SCIENCE

PROFESSOR—O. D. Skelton, M.A., Ph.D., F.R.S.C.

PROFESSOR—W. C. CLARK, M.A.

ASSISTANT PROFESSOR—W. A. Mackintosh, M.A.

ASSISTANT PROFESSOR OF COMMERCE—J. W. Ballard, B.C.S.

TUTORS—C. L. Yoerger.

Agnes McKercher.

H. A. Scott.

REGULATIONS

1. Students taking only one course in this subject must choose either Economics 1 or Economics 2; it is not necessary to take Economics 1 before Economics 2. Students taking two courses should select Economics 1 and Economics 2, but other combinations may be made with the sanction of the Department.

2. Students on a Pass course who choose this subject as their Minor must take Economics 1 and Economics 2 and four half-courses, not including more than two half-courses from 50 to 67.

3. Students on a Pass course who choose this subject as their Major must take the work in paragraph 2 and in addition the reading class 9.

4. Students seeking Honours in this subject are required to take from five to seven full courses or their equivalent, including Economics 1 and 2, two of courses 10, 11, 12 and 20, and, except with the consent of the Department, not including more than three half-courses from 50 to 70. Those making Economics their main subject must include the reading course 99. The additional prescription of work for Honour students in classes open both to pass and to honour men will be announced in each intra-mural course and in the extra-mural instructions.

5. For requirements for the B.Com. degree, consult the special announcement of the courses in Commerce and Administration.

6. Students completing their courses according to a former calendar may count four of 12, 16, 17, 21, 22, 25, 42, 45, 52, 54, 60 as equivalent to Preliminary Honours, not more than two being selected from courses 50 to 70, and, with the same restriction, they may count four of 10, 12, 16, 21, 22, 39, 45, 52, 54, 56, 60, along with thesis and including at least one of 10, 12, as equivalent to Final Honours.

7. The following courses (which are marked with an asterisk below) may be taken by extra-mural students during the session of 1922-23: 1, 2,

9, 10, 12, 16, 17, 21, 22, 25, 39, 42, 56, 60, 62, 63, 99. The following courses may be taken extra-murally during the summer session 1922: 1, 2, 10, 13, 15, 17, 22, 25, 41, 42, 56, 62, 63.

8. Courses 1 and 2 are whole courses, running throughout the year; all others are ordinarily given as semester or half-courses, though certain related courses may be required to be taken in sequence.

Courses 1-9 are introductory; 1 and 2 are fundamental for both pass and honour men; courses between 3 and 9 are not open to honour men. Courses 10 to 29 deal with economic and 30 to 49 with political and social questions; and 50 to 69 are Commerce and Administration courses. A list of the courses to be offered in this and succeeding years follows:

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|--|---|
| 1. Introduction to Economics. | 33. Imperial Relations. |
| 2. Introduction to Politics. | 34. Canadian Constitutional Law. |
| 9. Reading Course, for pass students. | 35. Government of Canada. |
| 10. Economic Theory: Production and Price Problems. | 36. Government of United Kingdom. |
| 11. Economic Theory: Distribution. | 37. Governments of Continental Europe. |
| 12. Socialism and Relation of the State to Industry. | 38. Government of United States. |
| 13. Problems of Labor. | 39. Modern Democracies. |
| 15. Economic History, United Kingdom and Europe. | 40. Municipal Government. |
| 16. Economic History, Canada and the United States. | 41. National Problems. |
| 17. Economic Geography, introductory. | 42. Social Problems. |
| 18. Economic Geography, advanced. | 50. Industrial Management. |
| 20. Organization of Industry. | 51. Personnel Management. |
| 21. Economics of Transportation. | 52. Marketing, Domestic. |
| 22. Economics of Agriculture. | 53. Marketing, Foreign. |
| 23. International Trade and Tariff Policy. | 54. Business Finance. |
| 24. Public Finance and Taxation. | 55. Investments. |
| 25. Financial Organization of Society. | 56. Introduction to Statistics. |
| 26. Canadian Banking System. | 57. Business Statistics. |
| 27. Foreign Banking Systems. | 58. Office Management. |
| 30. Political Theory since 1800. | 59. Business Policy. |
| 32. International Law and Organization. | 60. Commercial Law. |
| | 61. Commercial Law, advanced. |
| | 62-67 Accounting. |
| | 99. Reading Course for Honour students. |

9. The courses listed below are offered in 1922-23.

***ECONOMICS 1. INTRODUCTION TO ECONOMICS.**

A general discussion of the principles governing the production, consumption, exchange and distribution of wealth, and the application of economic principles to such concrete problems as money, banking, taxation, trusts, the tariff, and the labor movement.

Marshall, *Readings in Industrial Society* (University of Chicago Press).

Bulletins in Economics, furnished through the Department.

Extra-mural students will require in addition:

Clay, *Economics for the General Reader* (Macmillan).

Tuesday, Thursday, and Saturday at 10. Professor Clark.

***ECONOMICS 2. INTRODUCTION TO POLITICS.**

An approach to the study of the state, its origin, form and activities, and a study of the working of governments, particularly those of the United Kingdom, United States and Canada.

Leacock, *Elements of Political Science*.

Mill, *Representative Government; On Liberty* (Everyman's).

Readings in Politics and Readings in Government, furnished through the Department.

Assigned readings.

Monday, Wednesday, and Friday at 10. Professor Skelton.

ECONOMICS 9. READING COURSE FOR PASS STUDENTS taking their Major in Economics. Individual assignments.**ECONOMICS 10b. ECONOMIC THEORY: PRODUCTION AND PRICE PROBLEMS.**

A critical study of the chief historical and current theories in connection with the production and exchange of wealth. Among the subjects that will receive special consideration are the theory of value; the determination of competitive and monopoly price; price fixing—recent experiences and future possibilities; the role of competition, monopoly, custom and the state in the control of production and prices; factors of production—nature, proportioning, substitution; large-scale production and large-scale management; and business cycles—booms, crises and depressions.

Readings in the works of Adam Smith, Ricardo, Mill, Marshall and others will be assigned. No textbook is prescribed but in this course as in Economics 11 Gide and Rist's *History of Economic Doctrines*, and Taussig's *Principles of Economics* (3rd edition) will be found constantly useful.

Tuesday, Thursday, and Saturday at 9. Professor Clark.

*ECONOMICS 12a. SOCIALISM.

A study particularly of recent developments in the organized socialist movement and in the extension of state activity.

Assigned readings.

Monday, Wednesday, and Friday at 8. Professor Skelton.

*ECONOMICS 16b. ECONOMIC HISTORY OF CANADA AND UNITED STATES.

A study of the economic development attendant on the expansion of European settlements in North America. An elementary knowledge of the main facts of the history of Canada and of the United States, such as is to be obtained from a reading of *Grant's History of Canada*, and Max Farrand's, *The Development of the United States*, is a prerequisite. The importance of geographical factors in American history makes Economics 17a a useful introduction. No single text can be assigned for the Canadian field.

Lippincott, *The Economic Development of the United States* (Appleton).

Monday, Wednesday, and Friday at 11. Professor Mackintosh.

*ECONOMICS 17a. ECONOMIC GEOGRAPHY.

This course is designed to provide the student with a considerable body of material, descriptive of modern industry and commerce, and as a study of the influence of geographic factors on the rise, dispersion and concentration of industries, and on the location of markets and commercial routes.

J. Russell Smith, *Industrial and Commercial Geography* (Holt).

Bartholomew, *Atlas of Economic Geography* (Oxford University Press), for reference.

Monday, Wednesday, and Friday at 11. Professor Mackintosh.

*ECONOMICS 21b. ECONOMICS OF TRANSPORTATION.

This course is devoted almost entirely to railway transportation. Railway rates and regulation, the economics of construction, finance, statistics and accounting, railway problems in various countries, and government ownership will be discussed. Special attention throughout will be given to Canadian facts and problems.

Ripley, *Railway Rates and Regulation* (Longmans).

Monday, Wednesday, and Friday at 10. Professor Mackintosh.

*ECONOMICS 22a. AGRICULTURAL ECONOMICS.

A study mainly of Canadian conditions, with special attention to such problems as the place of agriculture in the national life, the rural exodus, land policy and land tenure, extensive and intensive farming, the marketing and distribution of farm products, rural credit, farmers' movements and the grain trade.

Nourse, *Readings in Agricultural Economics* (University of Chicago Press).

Hibbard, *Marketing Agricultural Products* (D. Appleton & Co.).
(To be given to extra-mural students only). Professor Clark.

***ECONOMICS 25a. THE FINANCIAL ORGANIZATION OF SOCIETY.**

A general survey of the modern financial system. Money and credit, commercial banks, investment banks, trust companies, savings banks, loan and mortgage companies, co-operative credit institutions, stock exchanges and the other institutions which make up the present financial structure, will be studied with a view to ascertaining the functions which they perform, their relations to one another and to the economic system as a whole. A brief comparative study of the commercial banking systems of England, Scotland, France, Germany, United States and Canada will also be made.

Moulton, *The Financial Organization of Society* (University of Chicago Press).

Readings in Money and Banking, furnished through the Department.

Assigned Readings.

Tuesday, Thursday, and Saturday at 9. Professor Clark.

***ECONOMICS 39b. MODERN DEMOCRACIES.**

A study of the actual working of popular government at the present time, particularly in the English-speaking countries.

Bryce, *Modern Democracies* (Macmillan).

Monday, Wednesday, and Friday at 8. Professor Skelton.

***ECONOMICS 42a. SOCIAL PROBLEMS.**

An introductory survey of social theory, followed by a detailed study of specific social problems. Though not prerequisite, Biology 1, and Philosophy 1 (Psychology) should, if possible, be taken before this course.

Assigned Readings.

Monday, Wednesday, and Friday at 10. Professor Mackintosh.

***ECONOMICS 45b. SEMINAR COURSE IN SOCIAL PROBLEMS.**

This course is open only to those who have taken Economics 42a or its equivalent, and who have a satisfactory knowledge of psychology and the principles of heredity. Specific problems will be covered intensively with the object of teaching methods of investigation, analysis and treatment of special problems.

Hour of meeting to be arranged.

Professor Mackintosh.

ECONOMICS 50a. INDUSTRIAL MANAGEMENT.

The object of this course is to acquaint the student with some of the problems to be met with in industrial plants. No attempt will be made to study these problems in their relation to specific industries but the machine shop type of factory will be the basis of the course.

Where possible, field excursions to establishments in the neighborhood of Kingston will be arranged. After each trip a brief report will be required.

During the term the student will be expected to cover assigned readings and to write frequent exercises. Hour examinations on the reading will be held once a month. Each student will also prepare a detailed report on a selected industry.

Kimball, *Principles of Industrial Organization*.

Students would also be well advised to purchase for themselves Frederick W. Taylor's *Shop Management*.

Monday, Wednesday, and Friday at 11. Mr. Morrow.

ECONOMICS 52a. MARKETING, DOMESTIC.

A study of marketing functions, organization, and policies from the standpoint of the economist and the business man. The study will be based upon specific problems derived as far as possible from Canadian experience.

Duncan, *Marketing, its Policies and Methods* (Appleton).

Monday, Wednesday, and Friday at 8. Professor Mackintosh.

ECONOMICS 54a. BUSINESS FINANCE.

Forms of business organization, nature, advantages, disadvantages and present range; sources of funds for business enterprise; temporary financing, bank credit, trade credit; permanent financing, bonds, stocks; promotion, incorporation and capitalization of companies; underwriting and sale of securities; problems in internal financial management; bankruptcy and reorganization; questions of public policy.

Lough, *Business Finance*.

Tuesday, Thursday, and Saturday at 8. Professor Clark.

*ECONOMICS 56b. INTRODUCTION TO STATISTICS.

A course in the collection, presentation and interpretation of statistical data.

Secrist, *Introduction to Statistics* (Macmillan).

Secrist, *Readings and Problems in Statistical Methods* (Macmillan).

Tuesday, Thursday, and Saturday at 8. Professor Clark.

ECONOMICS 59b. BUSINESS POLICY.

A course in Business Policy designed to correlate the work of the various specialized courses from the point of view of the chief executive. It will be conducted in the main by special lecturers presenting and discussing problems in location, expansion, factory management, labour administration, finance, insurance, transportation and selling policy, which have arisen and been solved in connection with particular businesses. Problems will be assigned to each student for study and report.

Shaw, *An Approach to Business Problems*.

Assigned Readings.

Hours to be arranged.

Mr. Morrow.

*ECONOMICS 60a. COMMERCIAL LAW.

This course will afford an introduction to the law governing business transactions. Special emphasis will be given to the general field of Contracts and to Bills of Exchange.

Geldart, *Elements of English Law* will be found a useful introduction to the subject; Falconbridge, *Negotiable Instruments*, covers the subject of Bills of Exchange. Cases and assigned readings.

Monday, Wednesday, and Friday at 9. Professor Skelton.

ECONOMICS 61b. COMMERCIAL LAW: ADVANCED.

This course will deal chiefly with statutory law, particularly the law of business organizations as developed in the Companies and Partnerships Acts, with some consideration of bankruptcy and trustee legislation.

Monday, Wednesday, and Friday at 9. Professor Skelton.

ECONOMICS 62a. ELEMENTS OF ACCOUNTING.

An elementary study of the principles of bookkeeping and accounting designed for the general student of economics, the student who plans to enter business, and the student preparing for the profession of Chartered Accountant. The course may be taken by those who have had no previous training in bookkeeping. The course will involve exercises and problems, and practice in keeping an actual set of books, and in preparing Trading and Profit and Loss statements and Balance Sheets.

Sprott and Short, *Canadian Modern Accounting*, vol. 1.

Tuesday, Thursday, and Saturday at 11. Professor Ballard.

*ECONOMICS 63b. ELEMENTS OF ACCOUNTING.

A continuation of Economics 62a, including a study of Joint Stock Company accounting, consignments, controlling accounts, reserves, and reserve funds, single entry bookkeeping, branch accounts, and

manufacturing accounts. The analysis of financial statements will be considered in detail.

Sprott and Short, *Canadian Modern Accounting*, vol. II.

Pixley, *How to Read the Balance Sheet*.

Tuesday, Thursday and Saturday at 11. Professor Ballard.

ECONOMICS 64a. INTERMEDIATE ACCOUNTING.

Prerequisite: Economics 62a and 63b.

An advanced course considering special points in Joint Stock Company accounting, the voucher system, the balance sheet, valuation, depreciation, cash and mercantile credits, temporary investments, permanent investments, equipment, buildings, land and wasting assets, intangible assets, liabilities, capital stock and its valuation, profits and surplus and reserves. The student will be required to solve problems in connection with the work.

Kester, *Accounting, Theory and Practice*, vol. II.

Tuesday, Thursday and Saturday at 10. Professor Ballard.

ECONOMICS 65b. INTERMEDIATE ACCOUNTING.

A continuation of Economics 64a, considering dividends, the sinking fund, profit and loss summary, liquidation, combinations and consolidations, branch house accounting, suspense accounts, reports of receivers and trustees, bookkeeping for executors, and some theories and problems in cost accounting.

Kester, *Accounting, Theory and Practice*, Vol. II.

Eggleston, *Problems in Cost Accounting*.

Tuesday, Thursday, and Saturday at 10. Professor Ballard.

ECONOMICS 66a. COST ACCOUNTING.

Prerequisites: Accounting 64a and 65b.

This course presents the principles and methods of cost accounting, cost components, basis of costs, controlling cost records, departmentalization, stock record accounting, requisitions, accounting for labor, calculating and applying burden rates, prevailing types of cost systems, by-product costs, installation of a cost system, tool records and interest on invested capital as a manufacturing cost. This course will be supplemented by a series of lectures on Income Tax Accounting.

Jordan and Harris, *Cost Accounting, Principles and Practice*.

Tuesday, Thursday, and Saturday at 8. Professor Ballard.

ECONOMICS 67b. AUDITING.

A study of the principles of auditing, audit of cash transactions, trading transactions, impersonal ledger, verification of assets, limited company, liability of auditors, partnership audits, investigations, statutes and legal decisions affecting auditors, etc. The

student will be asked to assist with the audits of the books of various student organizations. The course will be supplemented by a series of lectures on the Bankruptcy Act and the duties of Trustees.

Spicer and Pegler, *Practical Auditing*.

Dicksee, *Auditing*.

Tuesday, Thursday, and Saturday at 8. Professor Ballard.

*ECONOMICS 99. READING COURSES FOR HONOUR STUDENTS. Individual assignments.

MENTAL AND MORAL PHILOSOPHY

PROFESSOR OF MORAL PHILOSOPHY—John Watson, M.A., LL.D.,
D.D., D.Litt.

PROFESSOR OF MENTAL PHILOSOPHY—Alexander S. Ferguson,
M.A.

ASSISTANT PROFESSOR OF PHILOSOPHY AND LECTURER IN PSYCHO-
LOGY AND LOGIC—Norman J. Symons, M.A.

FELLOW IN MORAL PHILOSOPHY—D. P. Varnum, B.A.

REGULATIONS

1. Philosophy 1 and 2 are presupposed by the other courses.
2. A Minor in Philosophy consists ordinarily of courses 1, 2, 26, and 44.
3. A Major consists of the work required for a Minor together with Philosophy 9.

4. Honour students may regard Philosophy as a double subject (Mental and Moral Philosophy) and take the required twelve courses in the one Department, or they may take from five to seven courses in Philosophy and the rest in a related subject. All Honour students must take Philosophy 1, 2, 26, and 44, and those who make Philosophy their main subject must also include course 99, and one or more courses to be indicated after consultation with the Department. The advanced work is offered in a cycle in successive years.

Students who make Philosophy a double subject are expected to take at least one course which will show their ability to read a philosophical classic in a language other than English, and they are advised to choose their language subjects accordingly.

5. Students finishing under an old Calendar may take Philosophy 26 and 44 as the equivalent of Preliminary Honours, Philosophy 28 and 46 as the equivalent of Intermediate Honours, and Philosophy 27 and 29 as the equivalent of Final Honours.

6. In the summer of 1922 courses 1, 2 will be offered to extra-mural students. The courses open to extra-mural students in the winter of 1922-23 are marked with an asterisk.

COURSES OF INSTRUCTION

*PHILOSOPHY 1. MENTAL PHILOSOPHY.

- (i) Lectures on the History of Philosophy.

Watson, *Interpretation of Religious Experience*, Vol. I.

Rand, *Modern Classical Philosophers*.

Professor Watson (Section A).

Professor Ferguson (Section B).

(ii) Psychology.

Pillsbury, *Essentials of Psychology*.

Professor Symons (Sections A and B).

Tuesday, Thursday, and Saturday at 9.

*PHILOSOPHY 2. MORAL PHILOSOPHY.

(i) Plato, *Republic* I-IV (Lindsay's translation).

Professor Ferguson.

(ii) Lectures on Ethics.

Watson, *Outline of Philosophy*.

Watson, *The State in Peace and War*.

Monday, Wednesday, and Friday at 9. Professor Watson.

*PHILOSOPHY 9. READING COURSER FOR PASS STUDENTS.

To be arranged.

*PHILOSOPHY 22. THE POLITICAL PHILOSOPHY OF PLATO.

Plato, *Republic*.

Selections from the *Laws*.

Time and lecturer to be arranged.

*PHILOSOPHY 26. THE RISE OF MODERN PHILOSOPHY.

Rand, *Modern Classical Philosophers*.

Monday, Wednesday, and Friday at 8. Professor Ferguson.

PHILOSOPHY 27. THE PHILOSOPHY OF KANT.

Watson, *Selections from Kant*.

Philosophy of Kant Explained.

Tuesday, Thursday and Saturday at 8. Professor Symons.

PHILOSOPHY 29. DEVELOPMENT OF THE HEGELIAN PHILOSOPHY.

In this course the *Wissenschaft der Logik* will be read. The whole work will be covered in three years, and each year will count as a course.

Hours to be arranged.

Professor Watson.

*PHILOSOPHY 44. ETHICAL THEORIES.

This course is devised to give an insight into the main types of ethical theory. Illustrations will be provided by a study of selected passages from classical moralists.

Selby-Bigge, *British Moralists*.

Fite, *Introductory Study to Ethics*.

Hours to be arranged.

Professor Symons.

PHILOSOPHY 44b. THE PSYCHOLOGY OF THE INSTINCTS AND EMOTIONS.

McDougall, *Social Psychology*.

Drever, *Instinct in Man*.

Monday, Wednesday, and Friday at 11. Professor Symons.

*PHILOSOPHY 45. THE PSYCHOLOGY OF THE INSTINCTS AND EMOTIONS.

This course is arranged for extra-mural students. Additional reading will be prescribed.

PHILOSOPHY 46. LOGIC.

This course is intended to serve as an introduction to modern logical theory.

Bosanquet, *Implication and Linear Inference*.

Bosanquet, *Logic*.

Reference will be made to the *Logics* of Lotze, Sigwart, Bradley, and Croce.

Tuesday, Thursday, and Saturday at 11. Professor Ferguson.

*PHILOSOPHY 99. READING COURSE FOR HONOUR STUDENTS.

To be arranged.

PHILOSOPHY 100. THE PHILOSOPHY OF MR. BERTRAND RUSSELL.

Russell, *Analysis of Mind*.

References to other works.

Professor Ferguson.

PHILOSOPHY 101. THE PHILOSOPHY OF BERGSON.

Professor Symons.

Note.—Hours of Honour courses may be altered to suit the convenience of those attending.

MATHEMATICS

PROFESSOR—J. Matheson, M.A.

ASSOCIATE PROFESSOR—C. F. Gummer, M.A.

ASSOCIATE PROFESSOR—N. Miller, M.A., Ph.D.

ASSISTANT PROFESSOR—K. P. Johnston, B.A., B.Sc.

ASSISTANT—Etta A. Newlands, M.A.

TUTORS—F. R. Bamforth, B.A., L. F. Smith, L. T. McNeely, W. MacMillan, R. C. Brogden, E. Stephens.

REGULATIONS

1. Courses having numbers under 10, except 7, are whole courses, while those having numbers 10 and over, with the exception of Mathematics 99, are half-courses. Courses numbered 10 and over are Honour courses.

Students electing Mathematics as a Minor, Major, or Honour subject will consult the Department about the courses to be taken.

2. Pass students selecting Mathematics as their Major will take 1, 2, 9, and *any two* of 3, 4, 5, 6.

Pass students selecting Mathematics as their Minor will take 1, 2, and *any two* of 3, 4, 5, 6.

3. Courses numbered 10 to 18 are for undergraduates only, those numbered 20 to 23 for undergraduates or graduates, and those from 30 to 34 for graduates only.

4. All Honour students making Mathematics their principal subject must include in their selection the following: 1(h), 2, 10a, 11b, 12a, 13a, 14b, 15a, 16b, 17b or 18a, and 99. Such students are advised to take at least *eight* full courses in Mathematics, namely those just mentioned, the other of 17b or 18a, and *one* of 20b to 23. This is particularly important for students who have in mind the possibility of proceeding later to the degree of M.A.

5. Students working for the degree of B.A. with Honours in Mathematics are reminded of the purpose of the general examination to be taken at the end of the final year, which is to encourage a comprehensive study of the subject as a whole and the development of independence. Concentration on the special courses taken should not prevent this end from being kept in view.

6. Extra-mural instruction is limited to the following courses, which are marked with an asterisk:

Winter session, 1922-23: 1, 2, 10a, 11b.

Summer session, 1922: 1, 2, 10a, 11b.

COURSES OF INSTRUCTION

***MATHEMATICS 1. TRIGONOMETRY, ANALYTIC GEOMETRY, AND ALGEBRA.**

Barker, *Plane Trigonometry with Tables.*

Tanner and Allen, *Brief Course in Analytic Geometry.*

De Lury, *An Intermediate Algebra.*

Monday, Wednesday, and Friday at 8.

***MATHEMATICS 1 (h).**

This course covers about the same ground as course 1, but the object in view is to prepare students for higher work in Mathematics.

Monday, Wednesday, and Friday at 8.

***MATHEMATICS 2. ELEMENTARY CALCULUS, SYNTHETIC SOLID GEOMETRY, AND ANALYTIC GEOMETRY.**

Granville, *Differential and Integral Calculus.*

Tanner and Allen, *Brief Course in Analytic Geometry.*

(Prerequisite, 1.)

Tuesday, Thursday, and Saturday at 8.

MATHEMATICS 3. DESCRIPTIVE ASTRONOMY.

Moulton, *Introduction to Astronomy.*

(Prerequisite, 1.)

Tuesday, Thursday, and Saturday at 11.

MATHEMATICS 4. SYNTHETIC GEOMETRY, PLANE AND SOLID.

Dupuis, *Elementary Synthetic Geometry.*

(Prerequisite, 2.)

MATHEMATICS 5. ANALYTIC SOLID GEOMETRY AND APPLIED CALCULUS.

Snyder and Sisam, *Analytic Geometry of Space.*

Granville, *Differential and Integral Calculus.*

(Prerequisite, 2.)

MATHEMATICS 6. GENERAL COURSE, covering selected topics in Algebra, Trigonometry and Determinants.

(Prerequisite, 2.)

MATHEMATICS 7b. MATHEMATICS OF INVESTMENT.

This class is intended primarily for students in Commerce, but is open to other students.

Skinner, *The Mathematical Theory of Investment.*

(Prerequisite, 1.)

Tuesday, Thursday, and Saturday at 11.

MATHEMATICS 9. PASS READING COURSE.

*MATHEMATICS 10a. ALGEBRA.

Hall and Knight, *Higher Algebra*.

(Prerequisite, 1 (h).)

Monday, Wednesday, and Friday at 11.

*MATHEMATICS 11b. CALCULUS.

Granville, *Differential and Integral Calculus*.

(Open to students who have taken the first half of Mathematics 2.)

Monday, Wednesday, and Friday at 11.

MATHEMATICS 12a. DETERMINANTS AND THEORY OF EQUATIONS.

Dickson, *First Course in the Theory of Equations*.

(Prerequisites, 2, 10a.)

Monday, Wednesday, and Friday at 8.

MATHEMATICS 13a. SYNTHETIC GEOMETRY.

A course in Modern Synthetic Geometry, plane and solid.

(Prerequisite, 2.)

Monday, Wednesday, and Friday at 9.

MATHEMATICS 14b. SPHERICAL TRIGONOMETRY AND ASTRONOMY.

(Prerequisite, 2.)

Moulton, *Introduction to Astronomy*.

Dupuis and Matheson, *Spherical Trigonometry and Astronomy*.

Monday, Wednesday, and Friday at 8.

MATHEMATICS 15a. ANALYTIC SOLID GEOMETRY.

Snyder and Sisam, *Analytic Geometry of Space*.

C. Smith, *Solid Geometry*.

(Prerequisite, 12a.)

Tuesday, Thursday, and Saturday at 8.

MATHEMATICS 16b. DIFFERENTIAL EQUATIONS.

Murray, *Differential Equations*.

(Prerequisites, 2, 10a, and 11b.)

Tuesday, Thursday, and Saturday at 8.

MATHEMATICS 17b. ADVANCED ANALYTIC GEOMETRY.

Salmon, *Conic Sections*.

Smith, *Conic Sections*.

(Prerequisite, 12a.)

Monday, Wednesday, and Friday at 9.

MATHEMATICS 18a. ADVANCED CALCULUS.

Goursat-Hedrick, *Mathematical Analysis*, Vol. I.

Byerly, *Integral Calculus*.

(Prerequisites, 11b, 12a, and three of 13b, 14b, 15a, 16b, and 17b.)

Monday, Wednesday, and Friday at 9.

MATHEMATICS 20b. FINITE DIFFERENCES AND PROBABILITY.

Burn and Brown, *Elements of Finite Differences*.

Fisher, *The Mathematical Theory of Probability*.

(Prerequisites, 12a and three of 13a, 14b, 15a, 16b, and 17b.)

Tuesday, Thursday, and Saturday at 9.

MATHEMATICS 21 a or b. THEORY OF NUMBERS.

(Prerequisites, 12a and three of 13a, 14b, 15a, 16b, and 17b.)

MATHEMATICS 22 a or b. QUATERNIONS AND VECTOR ANALYSIS.

Kelland and Tait, *Quaternions*.

Hardy, *Elements of Quaternions*.

Wilson, *Vector Analysis*.

(Prerequisites, 12a and three of 13a, 14b, 15a, 16b, and 17b.)

MATHEMATICS 23 a or b. THEORY OF INFINITE SERIES.

(Prerequisites, same as for course 22.)

MATHEMATICS 30 a or b. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE.

Townsend, *Functions of a Complex Variable; and reference also to.*

Burkhardt-Rasor, *Theory of Functions of a Complex Variable*.

Goursat, *Cours d'Analyse Mathématique* (Tome Second).

Pierpont, *Functions of a Complex Variable*.

(Prerequisites, 18, and one of 20b, 21, 22, 23.)

MATHEMATICS 31 a or b. THEORY OF FUNCTIONS OF A REAL VARIABLE.

Goursat-Hedrick, *Mathematical Analysis*, Vol. I.

Pierpont, *Theory of Functions of Real Variables*, Vol. I.

(Prerequisites, same as for 30.)

MATHEMATICS 32 a or b. MODERN HIGHER ALGEBRA.

Bôcher, *Introduction to Higher Algebra*.

(Prerequisites, same as for 30.)

MATHEMATICS 33 a or b. DIFFERENTIAL GEOMETRY.

Eisenhart, *Differential Geometry*.

(Prerequisites, same as for 30.)

MATHEMATICS 34 a or b. PROJECTIVE GEOMETRY.

Veblen and Young, *Projective Geometry*, Vol. I.

(Prerequisites, same as for 30.)

MATHEMATICS 99. HONOUR READING COURSE.

PHYSICS

PROFESSOR—A. L. Clark, B.Sc., Ph.D., F.R.S.C.

RESEARCH PROFESSOR—A. Ll. Hughes, B.A., D.Sc.

PROFESSOR—W. C. Baker, M.A.

ASSOCIATE PROFESSOR—J. K. Robertson, M.A.

ASSISTANT PROFESSOR—E. Flammer, B.Sc., Ph.D.

LECTURER—W. V. Ball, B.A.Sc.

ASSISTANTS—G. W. Hudson, B.Sc., C. E. Parnell, B.Sc.

REGULATIONS

1. A student selecting Physics as a Minor subject on a Pass course will take Physics 1, 2, 11a, 13b, 14b and 15a.

2. A student selecting Physics as his Major subject on a Pass course will take 1, 2, 11a, 13b, 14b, 15a, and 9.

3. Students making Physics one of their two Honour subjects ordinarily take from three* to five courses in addition to Physics 1 and 2. These courses will be chosen, after consultation with the Head of the Physics Department, from 10, 12, 16a, 17b, 20b, 21a, and 99. Courses 10 and 12, however, are prerequisite to any of the others.

4. Students taking the special course in Science for Teachers will choose advanced courses from 10, 12, and any two of 11a, 13b, 14b, and 15a, the two chosen to be decided after consultation with the Head of the Department. As a rule, courses 11a and 15a are recommended.

5. Students completing their work under a former Calendar will take 10 and 12 for Preliminary Honours; 11a, 13b, 14b and 15a for Preliminary Experimental Honours (Courses VIII and VIII B of old Calendar); 11a and 15a for Preliminary Experimental Honours (Courses VIII, A, C and D); and 16a, 17b, 20b, 21a, and 22a or 22b for Final Honours.

6. Courses A 1 and A 2 only are open to extra-mural students, but the experimental part of the course must be postponed until it can be done intra-murally. The examination on the prescribed work may be taken in any examination period after the required standing on the exercises has been attained, but the experimental work must be done satisfactorily before credit for any course can be given.

7. The principal Physical Journals and books relating to the lectures and the laboratory work are kept in the Library of the Physics Department.

*A student, with permission of the departments concerned, may take advantage of Regulation B, Section 3, page 62, which makes it possible to take two or six courses (in addition to 1 and 2).

ment and in the University Library, where they may be freely consulted by the students. Certain of these may be borrowed for limited periods by making application to the librarians in charge.

COURSES OF INSTRUCTION

PHYSICS. A. 1. MECHANICS, PROPERTIES OF MATTER, HEAT, WAVE-MOTION, SOUND, LIGHT, ELECTRICITY, AND MAGNETISM.

The work of this course is elementary, forming the introduction to the subject. Its purpose is to lay a thorough foundation for subsequent work in theoretical, experimental, and technical Physics, as well as to give a fairly complete elementary knowledge of the subject to those who do not intend to pursue it further. Only an elementary knowledge of Mathematics is required.

Lectures: Three hours, Tuesday, Thursday, and Saturday at 11.

Laboratory: Two hours, Tuesday 1-3 or Tuesday 3-5 or Wednesday 3-5.
Professors Clark and Flammer.

PHYSICS. A. 2. MECHANICS AND LIGHT.

Prerequisite: Physics A. 1 or Honour Matriculation.

Students who enter this class with Honour Matriculation standing, and who have not taken Physics A. 1 may be required to do the laboratory work and to pass the examination of Physics A. 1. (See section B, paragraph 3, p. 55.)

MECHANICS. The work in this section is an extension of that done in Physics A. 1, treating the less simple parts of the subject and dealing with Dynamics of Rotation and Simple Harmonic Motion.

LIGHT. The work in this section consists of a detailed discussion of vibratory and wave motion; a treatment of Reflection and Refraction from the standpoint of wave theory; and a study of Dispersion, Interference, Diffraction, Spectroscopy, Polarization, and Double Refraction.

Lectures: Three hours—Tuesday, Thursday and Saturday at 9.

Laboratory: Two hours—Thursday, 3-5.

Professors W. C. Baker and Robertson.

PHYSICS, A. 9. PASS READING COURSE.

PHYSICS, A. 10. MECHANICS AND HEAT.

Prerequisite: Mathematics 2 and a minimum of fifty per cent. on Physics A. 2.

MECHANICS. A series of lectures in which the elements of statics and dynamics of a particle are discussed.

HEAT. A course on the fundamental laws of Thermodynamics and their application to the Thermodynamical Scale of Temperature, to the treatment of Saturated Vapours, and to Reversible Processes in general:

Lectures: Two hours—Tuesday and Thursday at 10.

Laboratory: Two hours—Tuesday, 3-5.

Professors Clark, W. C. Baker, and Flammer.

PHYSICS, A. 11a. MECHANICS AND PROPERTIES OF MATTER.

In this course the fundamental concepts of Physics are emphasized by the detailed discussion of such topics as Elasticity, Damped Harmonic Motion, Gyroscopic Phenomena, Surface Tension, Flow of Fluids, etc.

Prerequisite: Mathematics 2 and 55 per cent. standing on Physics, A. 2.

Lectures: Two hours—Monday and Wednesday at 8.

Laboratory: Two hours—Tuesday, 3-5. Professor W. C. Baker.

PHYSICS, A. 12. ELECTRICITY AND MAGNETISM.

This course is divided into two portions. In the first half, lectures are given on the elements of the Mathematical Theory of Electricity and Magnetism. In the second half an attempt is made to acquaint the students with some of the modern developments in Physics. Lectures are given on such topics as, The Structure of the Atom, Conduction of Electricity through Gases, Radioactivity.

Prerequisite: Mathematics 2 and 55 per cent. standing on Physics, A. 2.

Lectures: Two hours—Wednesday and Friday at 10.

Laboratory: Two hours—Thursday, 3-5.

Professors W. C. Baker and Hughes.

PHYSICS, A. 13b. ELECTRICITY AND MAGNETISM.

In this course an attempt is made to acquaint the student with some of the modern developments in Physics. Lectures are given on such topics as, The Structure of the Atom, Conduction of Electricity through Gases, Radioactivity.

Prerequisite: Mathematics 2 and 55 per cent. standing on Physics, A. 2.

Lectures: Two hours—Wednesday and Friday at 10.

Laboratory: Two hours—Thursday, 3-5.

Professor Hughes.

PHYSICS, A. 14b. HEAT.

A course on the fundamental laws of Thermodynamics and their application to the Thermodynamical Scale of Temperature, to the treatment of Saturated Vapours and to Reversible Processes.

Prerequisite: Mathematics 2 and 55 per cent. standing on Physics, A. 2.

Lectures: Two hours—Tuesday and Thursday at 10.

Laboratory: Two hours—Tuesday, 3-5.

Professor Clark.

PHYSICS, A. 15a. LABORATORY.

A laboratory course designed for students on a Pass course taking Physics as a Major or Minor, as well as for students taking Experimental Honour Physics under the old system of studies.

Laboratory: Six hours.

Students desiring to attend lectures in courses beyond 15a are advised to acquire a reading knowledge of French and German.

PHYSICS, A. 16a. DYNAMICS OF RIGID AND ELASTIC BODIES.

A discussion of Motions of a Rigid Body, Ellipsoids of Inertia, Motion with Fixed Axis and Fixed Point, Euler's Equations, and applications to Motion of the Symmetrical Top. Stress and Strain Relations in Elastic Bodies, Elastic Constants.

Prerequisite: Physics A. 10 and A. 12.

Lectures: Two hours—Monday and Wednesday at 11.

Laboratory: Two hours—Monday 2-4.

Professor Flammer.

PHYSICS, A. 17b. PHYSICAL OPTICS.

A course of lectures on the theory and phenomena of Physical Optics, including a discussion of Wave Motion, Diffraction, Interference Spectroscopes, Polarization and Double Refraction.

Prerequisite: Physics A. 10 and A. 12.

Lectures: Two hours—Tuesday and Thursday at 11.

Laboratory: Two hours—Monday 2-4.

Professor Robertson.

PHYSICS, A. 20b. ELECTRICITY AND MAGNETISM.

Electrodynamics, Conduction through Gases.

Prerequisite: Physics A. 10 and A. 12.

Lectures: Two hours—Monday and Wednesday at 11.

Laboratory: Wednesday 2-4.

Professor Flammer.

PHYSICS, A. 21a. KINETIC THEORY OF GASES.

Prerequisite: Physics A. 10 and A. 12.

Lectures: Two hours—Tuesday and Thursday at 11.

Laboratory: Wednesday 2-4.

Professor Hughes.

PHYSICS, A. 22 a or b. LABORATORY. *Six hours.*

PHYSICS, A. 27 a or b. MECHANICS.

The development and application of such important principles as the Principle of Virtual Work, Principle of d'Alembert, Hamilton's Principle of the Least Action, Lagrange's Equations, and a brief treatment of Non-Newtonian Mechanics.

PHYSICS, A. 28 a or b. HEAT.

Thermodynamical Equilibrium and Advanced Kinetic Theory.

PHYSICS, A. 29 a or b. OPTICS.

The Electro-magnetic Theory of Light with applications to the Theory of Dispersion and Absorption; Magneto- and Electro-optics.

PHYSICS, A. 30 a or b. ELECTRICITY AND MAGNETISM.**PHYSICS, A. 31 a or b. RADIATION AND QUANTUM HYPOTHESIS.****PHYSICS, A. 32 a or b. PARTIAL DIFFERENTIAL EQUATIONS OF PHYSICS.****PHYSICS, A. 33 a or b. ELECTRICAL OSCILLATIONS.****PHYSICS, A. 34 a or b. HYDRODYNAMICS AND AERODYNAMICS.****PHYSICS, A. 35. LABORATORY.**

Usually a small piece of directed research under the immediate supervision of a member of the staff. The aim is to familiarize the student with the conditions, methods, and spirit of physical research. If the student proves himself capable, he may be given a problem for independent investigation.

PHYSICS, A. 99. HONOUR READING COURSE.

Each student will be assigned work after consultation with the Head of the Physics Department.

The work in connection with this course will consist not only of independent reading but also of experimental work relating to the special field in which the student is reading.

CHEMISTRY

PROFESSOR OF CHEMISTRY—Arthur C. Neish, M.A., Ph.D.

PROFESSOR—L. F. Goodwin, A.C.G.I., Ph.D.

PROFESSOR—A. P. Lothrop, M.A., Ph.D.

ASSOCIATE PROFESSOR—John Waddell, B.A., D.Sc., Ph.D.

ASSISTANT PROFESSOR—J. A. McRae, M.A., Ph.D.

LECTURERS—A. F. G. Cadenhead, B.A.

Roy L. Dorrance, B.A.

M. E. Smith, M.A., Ph.D.

REGULATIONS

Sequence: Chemistry 1 and 2 are prerequisite to all other courses in Chemistry.

Pass Minor: Chemistry 1, 2, 21, 31 or 71.

Pass Major: Chemistry 1, 2, 21, 31 or 71, and 9.

Honours, Five courses: Chemistry 1, 2, 21, 31, 41.

Honours, Six courses: Chemistry 1, 2, 21, 31, 41, 61 or 71.

Honours, Seven courses, with Physics Minor: Chemistry 1, 2, 21, 31, 41, 99, and one of 101, 121, 45, 71, 106b-141b.

Honours, Seven courses, with Biology Minor: Chemistry 1, 2, 21, 31, 41, 99, and one of 61, 121, 106b-141b.

Old Preliminary Honours: Chemistry 31, 111hf. and 75hf.

Old Final Honours: Chemistry 21, 41 or 45.

NOTE.—Students taking honours in Chemistry must consult the Head of the Department after they have passed Chemistry 2.

Courses open to Extra-mural students in Summer School of 1922 and winter of 1922-23: Chemistry 1, 2, 21, 31. The laboratory work in extra-mural Chemistry must be done at the Summer School.

Candidates for the degree of M.A. who include Chemistry as one of their two special subjects must have their choice of courses approved by the Department.

	First	Second	Research
	Courses	or Advanced	Training
		Courses	Courses
Inorganic Chemistry	1, M 1	101, 106b	201
Qualitative Analysis	2	111hf.	..
Organic Chemistry	21, M 21	121, 123hf.	221
Quantitative Analysis	31	133hf.	231
Physical Chemistry	41, 45	141b	241
Physiological Chemistry	61	..	..
Industrial Chemistry	71, 75hf.	171a	271
Reading Courses	9	99	..

COURSES OF INSTRUCTION

Inorganic Chemistry

CHEMISTRY A. 1.—GENERAL INORGANIC CHEMISTRY.

This course besides dealing with the history, methods of preparation, properties and industrial application of the most important non-metals and metals and their compounds, emphasizes the fundamental theories, laws and principles of Chemistry. Elementary analytical chemistry is introduced and a few simple unknowns are given.

Texts—Alex. Smith, *General Chemistry for Colleges*.

Laboratory Outline for College Chemistry.

Prerequisite—Matriculation Chemistry and Physics or equivalents.

Lectures—Monday, Wednesday, and Friday at 9 in room 310.

Laboratory—Thursday, 1-3, in rooms 305-308.

Professor Neish and Assistants.

CHEMISTRY 101. ADVANCED INORGANIC CHEMISTRY.

In the lectures such topics are discussed as radioactivity, atomic weight, inert gases, rare metals, peracids and salts, double salts, alloys, metallic amino compounds. In the laboratory inorganic preparations will be made, such as cobaltcyanides, sodium bis-muthate, cobaltamines, and a number of others as given in Biltz.

Texts—References to books in Library.

Prerequisite—Chemistry 1, 2, 21, 31, 41.

Lectures—Tuesday and Thursday at 10 in room 105.

Laboratory—Friday, 1-4, room 207,

Professor Waddell.

CHEMISTRY 106b. COLLOID CHEMISTRY.

An introductory course of two hours per week for the second term. The lectures will deal with the general properties of colloids; surface phenomena; adsorption; and special stress will be laid on the practical applications of Colloid Chemistry. The importance of the subject both in the inorganic and organic fields will be demonstrated by laboratory experiments on the preparation of typical colloids, brownian movement, electrical properties, 'gold number,' swelling and hydration of gelatin, etc.

Text—Alexander, *Colloid Chemistry*.

Reference Texts—Bancroft, *Applied Colloid Chemistry*.

Bechold, *Colloids in Biology and Medicine*.

Hatschek, *Introduction of Physics and Chemistry of Colloids*.

Taylor, *The Chemistry of Colloids*.

Prerequisite—Chemistry 1, 2, 21.

Lectures and Laboratory—Friday 9-11, in rooms 105-109.

Mr. Cadenhead.

CHEMISTRY 201. INORGANIC CHEMISTRY—Research Training.

For graduate students electing thesis work in Inorganic Chemistry.

Professors Neish, Waddell, and Mr. Cadenhead.

Qualitative Analysis**CHEMISTRY 2. QUALITATIVE ANALYSIS.**

The lectures deal with the chemistry of the analytical reactions. The development and application of the laws of equilibrium and solutions are emphasized, and special attention is given to the application of the solubility product principle. The course includes the systematic analysis of the usual basic and acid radicals.

Texts—Stieglitz, *Qualitative Chemical Analysis*, Vols. I and II.

A. A. Noyes, *Qualitative Chemical Analysis*, 1920 edition.

NOTE.—This edition will be required of each student as it differs materially from previous editions.

Prerequisite—Chemistry 1 and Physics 1.

Lectures—Tuesday and Thursday at 11 in room 310,

Laboratory—Wednesday, 1-4, in rooms 107, 109.

Mr. Cadenhead.

CHEMISTRY 111 hf. ADVANCED QUALITATIVE ANALYSIS; half-course.

A course of three hours a week, consisting essentially of laboratory work, with an occasional lecture. The work will be a continuation of the work in Chemistry 2, together with the qualitative analysis of rare earths, metals and rare acid radicals. Or, a student may elect this course and Chemistry 2 at the same time making the combined courses equal to the full course in Qualitative Analysis given the Chemists and Chemical Engineers, Chemistry 15.

Texts—Same as Chemistry 2.

Prerequisite—Chemistry 1, 2, and Physics 1.

Laboratory—Thursday, 1-4, in rooms 107, 109.

Mr. Cadenhead.

Organic Chemistry**CHEMISTRY 21. ORGANIC CHEMISTRY.**

An elementary course in general organic chemistry. The properties of the more important compounds are studied in the laboratory and a number of them prepared.

Texts—Perkin and Kipping, *Organic Chemistry*.

Fisher, *Laboratory Manual of Organic Chemistry*.

Prerequisite—Chemistry 1, 2, and Physics 1.

Lectures—Wednesday and Friday at 11 in room 105.

Profesor Lothrop.

CHEMISTRY 121. ADVANCED ORGANIC CHEMISTRY.

Advanced systematic organic chemistry, including lectures on special topics such as terpenes, alkaloids, stereoisomerism and carbohydrates. The laboratory work consists of the preparation of a number of substances to illustrate the general laboratory methods of organic chemistry. Practice in quantitative organic analysis is also given.

Texts—Bernthsen-Sudborough, *Organic Chemistry*.

Cohen, *Practical Organic Chemistry*.

Books of Reference—Cohen, *Advanced Organic Chemistry*.

Sidgwick, *Organic Chemistry of Nitrogen*.

Prerequisite—Chemistry 1, 2, 21, 31, 41.

Lectures—Tuesday and Thursday at 11, in room 105.

Laboratory—Thursday 1-4, or Saturday 9-12, in room 213.

Professor McRae.

CHEMISTRY 123 hf. ADVANCED ORGANIC CHEMISTRY—half-course.

A course of three laboratory hours a week. This course will be a continuation of the laboratory work done in Chemistry 121. Or, the student may elect this course and 121 at the same time making the combined courses equal to Advanced Organic Chemistry 121 given the Chemists in their fourth year.

Professor McRae.

CHEMISTRY 221. ORGANIC CHEMISTRY—Research Training.

For graduate students electing thesis work in Organic Chemistry.

Professor McRae.

Quantitative Analysis**CHEMISTRY 31. QUANTITATIVE ANALYSIS.**

In addition to the use and care of the analytical balance, the analysis of Barium Chloride, Calcium Carbonate, Magnesium Sulphate, Coal, Bleaching Powder, Iron Ore, Copper Ore, Nickel Ore, Lead Ore, and Alkalimetry and Acidimetry are done in the laboratory and the underlying principles discussed in the lectures.

Texts—Waddell, *Quantitative Analysis in Practice*.

Prerequisite—Chemistry 1, 2, and Physics 1.

Lectures—Thursday at 1 in room 310.

Laboratory—Friday 1-4 in rooms 207, 219.

Professor Waddell.

CHEMISTRY 133 hf. ADVANCED QUANTITATIVE ANALYSIS—half-course.

A course of three hours' laboratory work a week. This course will be a continuation of the work done in Chemistry 31. Or, a

student may elect this course and Chemistry 31 at the same time, making the combined courses equal to the full course in Quantitative Analysis given the Chemists in their third year.

Laboratory—Friday 1-4, or Saturday 9-12, in room 207.

Professor Waddell.

CHEMISTRY 231. QUANTITATIVE ANALYSIS—Research Training.

For graduate students electing thesis work in Quantitative Analysis.

Professor Waddell.

Physical Chemistry

CHEMISTRY 41. PHYSICAL CHEMISTRY.

The course has for its primary object the inculcation of the fundamental principles of the Science of Chemistry by lectures, demonstrations, and quizzes. This course aims to give the student an acquaintance with the methods and instruments of physico-chemical technical operations and the procuring of accurate data for the solving of difficult problems arising in research or industrial operation. Studies are made of methods of procuring all sorts of physical constants such as surface tension, viscosity, transformation number, electrical methods, etc.

Texts—Washburn, *Principles of Physical Chemistry*.

Findlay, *Practical Physical Chemistry*.

Prerequisite—Chemistry 1, 2, 21, 31.

Lectures—Tuesday and Thursday at 9 in room 105.

Laboratory—Tuesday 1-4, or Saturday 9-12, in room 115.

Professor Goodwin.

CHEMISTRY 45. PHYSICAL CHEMISTRY, ELECTRO-CHEMISTRY.

The principal topics treated are the theory of electrolytic conduction, the electromotive force of primary cells, polarization, and electrolysis. A few examples of industrial processes are briefly discussed. The laboratory work is closely related to the lectures.

Texts—Allmand, *Applied Electro-Chemistry*.

Walker, *Elements of Physical Chemistry*.

Findlay, *Practical Physical Chemistry*.

Elbs-Hutton, *Electrolytic Preparations*.

Prerequisite—Chemistry 1, 2, 21, 31, 41.

Lectures—Monday at 10, in room 105, and Saturday at 8, in room 310.

Laboratory—Wednesday or Thursday 1-4, in room 115.

CHEMISTRY 141b. ADVANCED PHYSICAL CHEMISTRY.

This course deals with kinetics, mono- di- tri-molecular reactions and equilibria, catalysis, equations of state and kinetic theory, optimum temperatures, and thermo dynamics. Modern theory of solutions, hydration, boiling and freezing point laws. Thermo Chemistry, Thermo Dynamics of technical gas reactions.

Texts—Lincoln, *Physical Chemistry*.

Mellor, *Chemical Statics and Dynamics*.

Findlay, *Osmotic Pressure*.

Prerequisite—Chemistry 1, 2, 21, 31, 41.

Lectures—Monday and Friday at 11 in room 105, Gordon Hall.

Laboratory—Monday 1-4, in Gordon Hall.

Professor Waddell.

CHEMISTRY 241. PHYSICAL CHEMISTRY—Research Training.

For graduate students electing thesis work in Physical Chemistry.

Professors Goodwin, Waddell and Mr. Dorrance.

Industrial Chemistry

CHEMISTRY 71. INDUSTRIAL CHEMISTRY—Lectures and Laboratory.

In the lectures the following topics, illustrated by specimens, lantern slides, motion pictures, and visits to plants will be discussed: Industrial applications of air and water, natural gases, petroleum products, producer gas, water gas, coal gas, by-product coke, sulphur, sulphuric acid, sulphite liquor, hydrochloric acid, nitric acid and ammonia, nitrates natural and synthetic, soda, fertilizers, mortars and cements.

In the laboratory typical industrial processes as crystallization, precipitation, filtration, distillation and rectification, incomplete reactions, gas analysis and industrial flow sheets will be carried out and interpreted.

Texts—Rogers, *Manual of Industrial Chemistry*, or Thorp, *Outlines of Industrial Chemistry*.

Rogers, *Laboratory Guide of Industrial Chemistry*.

Prerequisite—Chemistry 1, 2, 21, 31, and Physics 1.

Lectures—Tuesday and Thursday at 10, in room 310.

Laboratory—Wednesday 1-4, in room 112.

Professor Neish.

CHEMISTRY 75 hf. INDUSTRIAL CHEMISTRY, lectures only; half-course.

This course consists of the same lectures as Chemistry 71, and is intended for students in Arts who may or may not wish to take Qualitative Analysis, but who are anxious to know something of the application of Chemistry.

Text—Rogers, *Manual of Industrial Chemistry*, or Thorp, *Outlines of Industrial Chemistry*.

Prerequisites—Chemistry 1 and Physics 1.

Lectures—Tuesday and Thursday at 10, in room 310.

Professor Neish.

CHEMISTRY 171a. ADVANCED INDUSTRIAL CHEMISTRY.

This course deals with the following subjects: Distillation and dephlegmation, wood distillation, alcohol, acetic acid, acetone, dissolution, decantation, filtration, centrifugals, manufacture of organic nitro compounds and explosives, cyanamide, ammonia. Equilibrium and optimum conditions for contact sulphuric acid and synthetic ammonia processes, absorption of gases by liquids and solids, absorption and reaction towers, electric furnace products and synthetic acetone, potash manufacture and recovery, recovery of waste acids, ceramics, films, sulphite, sulphate and mechanical wood pulp, paper.

Texts—References to books in Library.

Prerequisite—Chemistry 1, 2, 21, 31, 41.

Lectures—Monday and Friday at 9, in room 105,

Laboratory—Monday 1-4, in 112,

Professor Goodwin.

CHEMISTRY 271. INDUSTRIAL CHEMISTRY RESEARCH.

For graduate students electing thesis work in Industrial Chemistry.

Professors Neish and Goodwin.

Reading Courses

CHEMISTRY 9. HISTORY OF CHEMISTRY. Reading course for Pass students making Chemistry their Major. A mastery of the content of the following books will be required. Selections from Alembic Club Reprints.

Freund, *The Study of Chemical Composition*.

Campbell-Brown, *History of Chemistry*.

Caven and Lander—*Systematic Inorganic Chemistry*.

Professor Neish.

CHEMISTRY 99. GENERAL CHEMISTRY. READING COURSE for Honours students whose main work is in Chemistry. In addition to the work prescribed in 9, special topics will be assigned.

Professor Neish.

BIOLOGY

PROFESSOR—W. T. MacClement, M.A., D.Sc.

ASSISTANT PROFESSOR—A. B. Klugh, M.A.

ASSISTANT PROFESSOR—R. O. Earl, B.A.

TUTOR AND DEMONSTRATOR—H. C. White, B.A.

TUTOR—F. H. Gillan, B.A.

REGULATIONS

The work of the department of Biology is the general study of plants and animals in their development, forms, life processes and life relations.

All students beginning the study of Biology will take Biology 1. Students intending to go further with the subject will take also Biology 2, and then select courses in Botany, Zoology or Bacteriology. The student may confine his attention to one of these branches, or take courses from any or all of them. Almost any combination of the courses may be made, providing that attention has been given to the prerequisites. The advice of an instructor should be sought in the selection of courses.

Students taking Biology as a minor subject in a pass course will take Biology 1 and 2, and two courses or their equivalents in half courses from Biology 10, 11, 12a, 13b, 21, 22a, 23b, 24a, 25b.

Those taking Biology as a major subject in a pass course will take Biology 1 and 2, and one of the options of 9 as a reading course, with two courses or their equivalents in half courses from Biology 10, 11, 12a, 13b, 14a, 18, 21, 22a, 23b, 24a, 25b, Bacteriology 10a, 11b, 12b.

A student taking Honours in Biology will take Biology 1 and 2, and from three to five other courses chosen from 10, 11, 12a, 13b, 14a, 15a, 16b, 18, 19, 21, 22a, 23b, 24a, 25b, 28, Bacteriology 10a, 12b, 13a, 14b.

Students making Biology their main subject must include one course from 99, and may also include Biology 26 and 27 among those selected.

Students completing honour courses under the former system of studies will take for Preliminary Honours two courses or their equivalents in half courses from Biology 10, 11, 12a, 13b, 21, 22a, 23b, 28. For Final Honours two other courses will be selected from Biology 10, 11, 12a, 13b, 14a, 21, 22a, 23b, 26, 27, 28, 30, and Bacteriology 10a, 12b, 13a.

Extra-mural students may take Biology 1, 2, 11, 22a, and 22b in the summer of 1922. The laboratory work of these courses will be offered in the Summer School. For the winter of 1922-23 and the summer of 1923, Biology 1, 2, and 10 may be taken but no examination in these

may be written until the laboratory work has been completed. This will be offered in the Summer School of 1923.

For the qualification of Science Specialist in the Department of Education of Ontario a degree with honours in two of Biology, Chemistry, Physics is required. In Biology the student should include in his course five to seven of 1, 2, 10, 11, 21, 22a, 23b, and one other course selected with the approval of an instructor.

When a course in Medicine is to follow the Arts course the following in Biology will prove most useful: 1, 2, 10, 11, 14a, 15a, 16b, 18, 21, 22a, 23b, 26, 27, 28.

As a preparation for any branch of Agriculture students should take as many as possible of Biology 1, 2, 10, 11, 12a, 13b, 15a, 16b, 18, 21, 22a, 23b.

Students looking forward to a lifework in the Civil Service, as in Agriculture, Fisheries, or Forestry work, should take one of the Research courses in Biology, Bacteriology, and Biochemistry as outlined on p. 66.

COURSES OF INSTRUCTION

BIOLOGY 1. ELEMENTARY BOTANY AND ZOOLOGY.

(i) An outline study of the structures, activities and life relations of seed plants.

- (a) The dissection, drawing and discussion of seeds, roots, stems, buds, leaves, flowers, fruits.
- (b) Lectures and experiments in plant physiology.
- (c) Outline of forest conservation.
- (d) Field work to study the relations of plants to their environment.

Textbook: Ganong, *Botany for Colleges*.

(ii) An elementary course in General Zoology, with special reference to the fauna of Canada, Elementary Physiology. Dissection of the earthworm, clam, locust, frog, and mammal. Scalpel, forceps and scissors are required for these dissections. Careful drawings will be made.

Textbooks: Kellogg, *Elementary Zoology*.

Colton, *Practical Zoology*.

Lectures, Tuesday at 9.

Laboratory, Monday and Wednesday, 2 to 4.

Professor MacClement.

BIOLOGY 2. GENERAL BOTANY AND ZOOLOGY.

(i) Lectures in General Zoology with special reference to heredity, variation, evolution, physiology, economic zoology, and elementary animal ecology.

- (ii) Microscopic study of the protozoa and hydra, and the dissection and drawing of the crayfish, fish, bird and mammal.

Textbooks.

Kellogg, *Elementary Zoology*.

Colton, *Practical Zoology*.

- (iii) An outline study of the structure and reproduction of the seedless plants.
- (iv) Microscopic study of algae, fungi, mosses and ferns.
- (v) Drawing of anatomical sections of leaves, stems, roots, fruits and seeds.

Textbooks: Ganong, *Botany for Colleges*.

Stevens, *Plant Anatomy*.

Lecture, Tuesday and Thursday at 10. Laboratory, Monday, 2-4.

Professor Klugh.

BIOLOGY 3. MEDICAL BIOLOGY.

Lectures, Tuesday and Thursday at 1.

Laboratory—Sec. A, Monday, Wednesday, and Friday, 10-12.

Sec. B, Tuesday and Thursday 2-4, Saturday 10-12.

For further particulars see Medical Calendar.

Professor Earl.

BIOLOGY 9. READING COURSE.

Pass students taking their major in Biology may select one of the following options as a reading or unassisted course:

- (i) THE PRINCIPLES OF CLASSIFICATION applied to Algae, Fungi, Mosses, Ferns, Fern Allies, Flowering Plants. A laboratory course of six hours per week.

Professor MacClement.

- (ii) EVOLUTION AND GENETICS.

Students will consult the instructor as to the work of the course.

Professor Earl.

- (iii) ECONOMIC ZOOLOGY.

Students will consult the instructor as to the work of the course.

Professor Klugh.

BIOLOGY 10. PLANT MORPHOLOGY.

A study of the development, structure, modification and reproduction of plants. The microscopic study of materials to illustrate them. Permanent records of observations.

Prerequisites—Biology 1 and 2.

Lecture, Tuesday at 8. Laboratory, Tuesday and Thursday 2-4.

Professor Earl.

BIOLOGY 11. PLANT PHYSIOLOGY.

A series of experimental studies of the chemical and physical activities of plants, with class discussions.

Prerequisites—Biology 1 and 2, and Chemistry A1.

Lecture, Monday at 11. Laboratory, Monday and Friday 2-4.

Dr. Reed.

BIOLOGY 12a. PLANT ANATOMY.

The study of the anatomical structure of plants, and the structural modifications due to special environment.

Prerequisites—Biology 1 and 2.

Lectures, Wednesday and Friday at 9; Laboratory, Friday 2-4.

Professor MacClement.

BIOLOGY 13b. PLANT ECOLOGY, GEOGRAPHICAL.

The relations of plants to latitude, altitude, climate, and other distributive factors.

Prerequisites—Biology 1, 2, 10, 11.

Lectures, Wednesday and Friday at 9; Laboratory, Thursday 2-4.

Professor MacClement.

BIOLOGY 14a. MICROTECHNIQUE.

The fundamentals of plant histology and cytology. Chemical tests and stains for the chief constituents and products of plants. The preparation of permanent mounts of the different classes of plant structures.

Prerequisites—Biology 1 and 2, Chemistry A1.

Laboratory, Thursday 1-5.

Mr. White.

BIOLOGY 15a. EVOLUTION AND GENETICS.

A consideration of data and concepts of organic evolution; the principles of genetics; experimental work on variation and heredity in plants and animals.

Prerequisites—Biology 1 and 2.

Lectures, Monday and Wednesday at 9; Laboratory, Monday and Friday 2-4.

Professor Earl.

BIOLOGY 16b. GENETICS.

A study of the physical and physiological aspects of the mechanism of heredity, and of heredity in relation to problems of plant and animal breeding and eugenics; exercises and experimental work.

Prerequisites—Biology 1 and 2 and preferably 15a.

Hours to be arranged.

Professor Earl.

BIOLOGY 17a. PALEOBOTANY.

The methods and forms of plant fossilization, their geological distribution, and their relations to living forms.

Prerequisites—Biology 1, 2, 10, Chemistry A1, Geology 1, 2.

Lecture and laboratory hours to be arranged.

Professor MacClement.

BIOLOGY 18. ECONOMIC FUNGI.

Class and laboratory studies of the fungi producing the more important plant diseases.

Prerequisites—Biology 1, 2, 10.

Lecture, Thursday at 8. Laboratory, Tuesday and Thursday 2-4.
Professor MacClement and Mr. White.

BIOLOGY 19. GENERAL PHYSIOLOGY.

Selected topics in fundamental cellular physiology from a chemical viewpoint. Laboratory work, reading and conferences.

Prerequisites—Biology 12 and Chemistry 2 and 21.

This course may be taken by properly qualified students as a half-course in the first term, or as a full course throughout the session.

Dr. Reed.

BIOLOGY 21. CANADIAN ZOOLOGY.

The classification, distribution, life histories, habits and economic importance of types representing the Canadian fauna. The study of museum specimens of representatives of each group.

Prerequisite—Biology 1.

Lectures, Tuesday and Thursday at 11. Laboratory, Friday 2-4.
Professor Klugh.

BIOLOGY 22a. ELEMENTARY HISTOLOGY.

The microscopic study of animal tissues.

Prerequisites—Biology 1 and 2.

Lecture, Wednesday at 11. Laboratory, Tues. and Thurs. 2-4.
Professor Klugh.

BIOLOGY 23b. ELEMENTARY ANATOMY.

The microscopic study of the amoeba, paramoecium, euglena, vorticella and hydra, and the dissection of the starfish, clam, earthworm, locust, spider, frog, and a mammal.

Prerequisite—Biology 1 and 2.

Lecture, Wednesday at 11. Laboratory, Tues. and Thurs. 2-4.
Professor Klugh.

BIOLOGY 24a. ANIMAL ECOLOGY.

The physical and biological factors of the environment, succession, convergence, formations, associations, and consocieties. Practical application of ecology.

Lectures, Monday, Wednesday, and Friday at 10.

Professor Klugh.

BIOLOGY 25b. ANIMAL PSYCHOLOGY.

The nervous systems, senses, and behavior of animals, and their psychological development.

Prerequisite—Biology 1, 2, 23b.

Lectures, Monday, Wednesday, and Friday at 10.

Professor Klugh.

BIOLOGY 26. PHYSIOLOGY. Second year in Medical course.

Study of the general principles of Physiology, and the physiological investigation of blood, circulation, respiration, muscle, and nervous system. The physiology of digestion, metabolism, excretions, and internal secretions.

Prerequisite—Biology 1 and 2 (or 3), 22a, 23b.

For lectures and laboratory hours see Medical Calendar.

Dr. G. S. Melvin.

BIOLOGY 27. PHYSIOLOGY AND EMBRYOLOGY. Third year in Medical course.

Advanced Physiology, and the Embryology of the pig and chick.

Prerequisites—Biology 1 and 2 (or 3), 22a, 23b, 26.

For lectures and laboratory hours see Medical Calendar.

Dr. G. S. Melvin.

BIOLOGY 28. COMPARATIVE ANATOMY OF VERTEBRATES.

A detailed study of the anatomy of the frog, bird, and mammal.

Prerequisites—Biology 1, 2, 22a, 23b.

Laboratory, Tuesday, Wednesday and Thursday, 2-4.

Professor Klugh.

BIOLOGY 30. ECONOMIC ZOOLOGY.

Either of the following divisions will constitute a full course:

(i) Marine and fresh water biology with special reference to the fisheries.

(ii) Economic Entomology.

Prerequisites—Biology 1, 2, 21, 23b, 24a.

One lecture and four laboratory hours per week to be arranged.

Professor Klugh.

BIOLOGY 99.

Honour students making Biology their main subject may select one of the following options as a reading or unassisted course:

(a) EVOLUTION AND GENETICS.

This is a reading and laboratory course on the theories of evolution and genetics.

Prerequisites—Biology 1 and 2.

Professor Earl.

(b) ECONOMIC ZOOLOGY.

This is a reading and laboratory course in the identification of animal forms and the qualities which make them important to mankind.

Prerequisites—Biology 1 and 2, 21, 23b, 24a. Professor Klugh.

(c) TAXONOMY OF PLANTS.

The principles of classification applied to Algae, Fungi, Mosses, Ferns and Fern Allies, Flowering Plants. A laboratory course of six hours per week for Honour credit. Professor MacClement.

BACTERIOLOGY

PROFESSOR—Guilford B. Reed, M.A., B.Sc., Ph.D.

REGULATIONS

1. Students in a Pass course taking Biology as a Major may take as a part of the Biology prescription Bacteriology 10a and 12b.
2. Students taking Biology as an Honour subject may elect as a part of the Biology prescription Bacteriology 10a, 12b, 13a, and 14b.

COURSES OF INSTRUCTION

BACTERIOLOGY 10a.

An introductory course in general Bacteriology, including the structure and physiology of bacteria; fermentation and decomposition, especially in foods; disease and immunity.

Prerequisites: Biology 1, 2, 11, and Chemistry 1.

Lectures, Wednesday and Friday at 9.

Laboratory, Tuesday and Thursday, 1-3.

BACTERIOLOGY 12b. THE PATHOGENIC BACTERIA, a systematic study of the disease producing organisms; infection and immunity.

Lectures, Wednesday and Friday at 9.

Laboratory, Tuesday and Thursday 1-3.

BACTERIOLOGY 13a. THE MICROBIOLOGY OF FOODS AND WATER SUPPLIES.
Hours to be arranged.

BACTERIOLOGY 14b. GENERAL BACTERIOLOGY, selected topics, laboratory work, reading and conferences.

Hours to be arranged.

BACTERIOLOGY 20. RESEARCH IN GENERAL PHYSIOLOGY AND BACTERIOLOGY.

GEOLOGY

PROFESSOR—M. B. Baker, B.A., B.Sc., F.G.S.A.

ASSISTANT PROFESSOR—Stanley Smith, M.A., D.Sc., F.G.S.

REGULATIONS

1. Students taking Geology 1 who are not taking Mineralogy 1 must attend Mineralogy A one hour a week for the first term to become familiar with rock forming minerals. Mineralogy 1 is prerequisite to Geology 2 and 10. Mineralogy 2(i) is part of Geology 10.

2. For a Minor in Geology students will take Mineralogy 1 and Geology 1, 2, and 13.

3. For a Major in Geology students will take either the inorganic and economic side, or the organic paleontological side. In the first case they will select Mineralogy 1 and Geology 1, 2, 9 and 10; in the second case Mineralogy 1 and Geology 1, 2, 9 and 13.

4. For Honours in Geology, students will again select either the inorganic or the organic side and will take course 99 and from four to six courses from either of the following groups:

A. Mineralogy 1 and Geology 1, 2, 10, 14, and 15.

B. Mineralogy 1 and Geology 1, 2, 13, 18, and 19.

5. Both Geology 1 and Mineralogy 1 will be offered in the summer school of 1922. The extra-mural course in Geology is offered as usual for the winter session of 1922-23.

Text-books:

Scott's *An Introduction to Geology* (Macmillan).

Salsbury's *Physiography* (Holt).

COURSES OF INSTRUCTION

GEOLOGY 1. INTRODUCTORY COURSE IN PHYSIOGRAPHY AND GENERAL GEOLOGY.

The following topics indicate roughly the scope of the course: Forces operating on the earth's surface,—the atmospheric forces, streams, glaciers, waves, etc.; the land forms produced by these forces; volcanism; earth movements; structure of the earth's crust; mountain formation; kinds of rocks and their formation; fossils; outline of the history of the earth, including the evolution of its plant and animal life. In addition to those topics which are

more particularly the province of Geology, consideration is given to the various types of topography and their method of formation, the atmosphere, its temperature, moisture and circulation, storms, climate, ocean currents, tides, etc., and, as far as time will permit, their influence on the human race will be indicated. This course will prove valuable to students who contemplate teaching Physical Geography in our schools.

The lectures are illustrated by maps, models, lantern slides, and specimens.

LABORATORY WORK will consist of the examination of typical specimens of fossil plants and animals, and of hand specimens of the more common rocks, together with the field excursions, the expenses of which are covered by the laboratory fee.

Text-book: Norton, *Elements of Geology*.

Monday, Wednesday, and Friday at 11. Professor Smith.

GEOLOGY 2. STRUCTURAL AND PHYSIOLOGICAL GEOLOGY, AND THE GEOLOGY OF CANADA.

- (i) The principles of earth movements, deformation, faulting, mountain formation and volcanism are covered in a more general and more advanced way than in Geology 1.
- (ii) Advanced consideration of surface processes, action of winds, streams, waves, glaciers, etc., various types of marine and continental sedimentation, and the development of land forms, map reading and interpretation.
- (iii) In this course special attention will be given to stratigraphical Geology, and the distribution of the various rock formations in Canada. The topography as well as the structural make-up of the Dominion is studied. The climatic and economic differences of the various portions of Canada are explained.

Monday, Wednesday, and Friday at 9. Professor Smith.

GEOLOGY 9. READING COURSE in Inorganic Geology for Pass students.

GEOLOGY 10. ELEMENTARY PETROGRAPHY.

This course is essentially on igneous Geology and Petrography, and will consist of lectures and discussion on the geological occurrences of igneous rocks, the processes of crystallization from magmas, the forms assumed, the textures, and the metamorphic changes that are produced in the intrusive mass itself, and on its

surroundings. The lectures will be illustrated by projections of thin sections of rocks, and will be supplemented by laboratory work on hand specimens. Students taking this course will include Mineralogy 2 (i) as part of the work.

Text-books:

Luquer, *Minerals in Rock Sections.*

Pirsson, *Rocks and Rock Minerals.*

Tuesday and Thursday at 10. Professor Baker.

GEOLOGY 13. HISTORICAL GEOLOGY.

Continental evolution and geologic life development with special reference to North America.

Text-book: Chamberlin and Salsbury, *College Geology.*

Tuesday and Thursday at 9. Professor Smith.

GEOLOGY 14. ADVANCED PETROGRAPHY.

A course of lectures will be given on the microscopic characters and classification of igneous rocks, and on their origin, geological form, and general field characters. The lecture work will be supplemented by assigned special reading and by laboratory work with both hand specimens and microscopic slides. Special attention will also be paid to the metamorphic rocks.

Tuesday at 1 and 2. Professor Baker.

GEOLOGY 15. ECONOMIC GEOLOGY.

The work in this class is an illustration of the principles of ore deposition. For this purpose type deposits in the largest producing districts throughout the world are studied in some detail. It is of course impossible to treat of all products, but the basis of classification and the fundamental principles underlying economic deposits are studied with particular reference to iron, copper, nickel, zinc, lead, silver, gold, aluminum, peat, coal, gas, oil, salt, abrasive and refractory materials. A few lectures on building stone, and on clays and the manufacture of clay products will be given.

Within one hundred miles of Kingston a greater variety of economic minerals and ores is mined than in any similar area in Canada, and possibly in the world. Through the kindness of the managers, advanced students may visit the various mines and thus gain valuable information regarding economic Geology.

Monday at 10, Tuesday and Wednesday at 11. Professor Baker.

GEOLOGY 17. FIELD AND LABORATORY GEOLOGY.

The laboratory exercises in this course are designed to illustrate by means of specimens, models, photographs, maps, and sections, the principal original and secondary structures of rocks; the origin and mode of occurrence of rocks in the earth's crust, their cycles of alteration and change, their interpretation and representation in geological surveys and maps.

The field work comprises observations upon the weathering of rocks, shore phenomena, glacial phenomena, igneous and sedimentary rocks, faulting, folds, joints, cleavage, schistosity. It gives practice in methods of surveying; in geological mapping, and construction of sections; in measuring the thickness of strata; and in determining the relative ages of geological structures. The preparation of a map to scale from actual field work done by the student is required.

Six working hours a week will be arranged to suit the class at the beginning of the fall term.

GEOLOGY 18. SYSTEMATIC PALEONTOLOGY.

A study of invertebrate and vertebrate fossils, their classification, identification, and distribution, both geologic and geographic.

Text-book: Woods, Paleontology.

Lectures, Tuesday and Thursday at 11.

Two laboratory hours per week to be arranged to suit students' time-table.

Professor Smith.

GEOLOGY 19. STRATIGRAPHY.

The problems of sedimentation and the sedimentary rocks.

Lecture, Wednesday at 10. Professor Smith.

Four laboratory hours to be arranged.

Reference Book: Grabau, The Principles of Stratigraphy.

GEOLOGY 99. READING COURSE in Organic Geology for Honour students.

MINERALOGY

PROFESSOR—E. L. Bruce, B.Sc., M.A., Ph.D., F.G.S.A.

ASSISTANT PROFESSOR—Stanley Smith, M.A., D.Sc., F.G.S.

REGULATIONS

1. Students taking Mineralogy 1 must have matriculated in Chemistry or have passed in Chemistry 1 or take Chemistry 1 concurrently.

2. Students taking a Minor, a Major, or Honours in Mineralogy must include among their courses, besides the prescribed courses in Mineralogy itself, such courses in Geology, Chemistry and Physics as are necessary to secure proper preparation and balance. The details should be arranged in consultation with the Professor. Some of the requirements regarding courses in Geology to be included are stated below.

3. Mineralogy 1, 2, and 11 must be taken in the order named and are prerequisite to all other courses in Mineralogy. The order in which the other courses are taken may be varied to suit the individual case. In special cases 2 and 11 may be taken concurrently.

4. For a Minor a student will take Mineralogy 1, 2, 11, and Geology 1. For a Major a student will take Mineralogy 1, 2, 9, 11, and Geology 1. For Honours a student will take course 99 and four to six courses from one of the following groups:

A. Mineralogy 1, 2, 11, 12, 15a and Geology 1.

B. Mineralogy 1, 2, 11, 13, 14, and Geology 1.

5. Students continuing courses begun under an old calendar should regard 1 as equivalent to Pass Mineralogy; 2 and 11 or 12 as equivalent to Preliminary Honours; and 13 and 14 equivalent to Final Honours.

6. Students in Mineralogy are expected to take part in the four or five field excursions which are made on Saturdays during October and November. The cost of the field work will not exceed \$5.00.

7. Each student in the department on making a deposit of \$10.00 is supplied with a locked cabinet containing about 150 mineral specimens.

COURSES OF INSTRUCTION

MINERALOGY A. PREPARATORY MINERALOGY.

A laboratory and demonstration class of one hour a week during the first term is given for students who are taking Geology without taking or having taken Mineralogy. It is designed to make students

familiar with the common rock-forming minerals and ores in order to enable them properly to appreciate the work in Geology.

Friday at 1.

MINERALOGY 1.

A course in Elementary Crystallography, Blowpipe Analysis and Descriptive and Determinative Mineralogy of about 100 common mineral species.

Text-book: Ford, *Dana's Manual of Mineralogy*.

Lectures: Wednesday at 10, Tuesday 1-3. Professor Bruce.

MINERALOGY 2.

(i) OPTICAL MINERALOGY.

(ii) PHYSICAL MINERALOGY AND CRYSTALLOGRAPHY.

An advanced course in the character of crystals and crystal measurements.

Lectures: Wednesday at 8, and Friday at 10.

Laboratory: Two hours a week, to be arranged.

Professor Bruce.

MINERALOGY 11. DESCRIPTIVE AND DETERMINATIVE MINERALOGY.

A course describing the properties, occurrence and uses of the more important minerals together with practical work in their determination.

Lecture: Wednesday at 1.

Laboratory: Wednesday, 2-4.

Dr. Smith.

MINERALOGY 12. ADVANCED DESCRIPTIVE AND DETERMINATIVE MINERALOGY.

A course covering the rarer mineral species and mineral alteration.

Lecture: Friday at 11; *Laboratory:* 1-3.

Professor Bruce.

MINERALOGY 9.

A Laboratory and reading course for Pass students, involving an original investigation of some mineral or mineral product.

Professor Bruce.

MINERALOGY 13. MINERAL TECHNOLOGY.

A study of alloy minerals, abrasives, refractory materials, fertilizers, building stones, etc. This course deals chiefly with the occurrence and utilization of the non-metallic minerals.

Lectures: Tuesday and Thursday at 9.

Professor Bruce.

MINERALOGY 14. MINERALOGRAPHY.

The study of opaque minerals with the metallographic microscope.
Paragenesis of ores.

Lectures and Laboratory: Three hours per week, to be arranged.

Professor Bruce.

MINERALOGY 15a. ADVANCED CRYSTAL OPTICS.

Lectures and laboratory work on the optical properties of crystals including natural minerals, artificial products, etc.

Lectures and Laboratory: Three hours per week, to be arranged.

First term. Professor Bruce.

MINERALOGY 16b. CHEMISTRY OF MINERALOGY.

A general survey of mineral density and of the processes involved in mineral deposition. A study of inversion phenomena, monotropy, enantiotropy, eutectics, solid solutions, etc., with their geological and technological significance.

Three hours per week, lectures and reading to be arranged.

Second term. Professor Bruce.

MINERALOGY 99.

An advanced course similar to 9 for Honour students.

Professor Bruce and Dr. Smith.

GRADUATE COURSES

I. REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

1. *Pre-requisite work.* A candidate for the degree of Master of Arts must have taken the degree of Bachelor of Arts in some preceding academic year.

2. *Application.* Application for permission to become a candidate for the degree of Master of Arts must be made to the Registrar. The applicant, if not a graduate of Queen's University, should send an official certificate giving full details of his previous academic training, including courses taken and grades received, together with a marked Calendar showing the content of the courses. He should also state in what field he desires to carry on his studies. The amount and distribution of work will be determined in each case by the Committee on Studies on the basis of the general regulations contained in sections 3 and 4 below:

3. *Character of the work.* The degree of Master of Arts is given, not on the ground of general attainments, but in recognition of the candidate's wide knowledge of a special field of study. A candidate must ordinarily take advanced work in the two main subjects of his undergraduate Course. With special permission, however, he may concentrate on one of his special subjects or he may count work in a third related subject if it can be shown to belong to a consistent plan of study.

The work prescribed shall consist of the following:

(a) *Advanced* lecture courses.

(b) Directed special studies, with reports, essays, and conferences.

A thesis or other piece of independent work will be required from all candidates.

Candidates for the degree of Master of Arts may be given written and oral examinations on the whole field of their work.

4. *Amount of work.* The work shall be the equivalent of four Honour courses for those who have taken the degree of Bachelor of Arts with Honours in two special subjects, and of five Honour courses for those who have taken a Pass degree with first division in a total of at least three courses beyond courses 1 and 2 in the special subjects. Those who do not qualify under these conditions must repeat earlier work to bring up their standing.

The work for the degree of Master of Arts for those who have taken the degree of Bachelor of Arts with Honours in connection with the Special Course for Teachers will be the equivalent of five courses.

5. *Standing required.* The degree of Master of Arts will be conferred upon a student who, having satisfied the conditions mentioned above, makes at least sixty-six per cent. in each of the prescribed courses.

6. *Fees.* The fees charged are the same as for undergraduate work. See FEES.

Departmental outlines of work that may be counted towards the degree of Master of Arts are given below:

Details of courses referred to by numbers will be found under the various Departmental announcements beginning on page 70.

Latin

Lecture courses: 100, 101, 102.

Directed special studies in Latin Syntax and Roman History.

Greek

Lecture courses: 100, 101, 102.

Directed special studies in Greek Art and Archaeology and in Greek Philosophy and Religion.

German.

Lecture courses selected from 11a, 12b, 22a, 23b, 31a, 33b.

Directed special studies consisting of the option under German 99 not counted towards the degree of B.A. with Honours.

French.

Lecture courses: 14 and 23. If only one of these is chosen it must be 14.

Directed special studies to be determined upon consideration of the candidate's previous Course.

Spanish

Lecture courses: Any courses numbered from 20 to 29.

Directed special studies based on:

(a) *Literatura Caballeresca.*

(b) *Escritores Místicos Españoles.*

(c) *Dramáticos contemporáneos a Lope de Vega.*

(d) *Calderón considerado como dramático religioso.*

(e) *Espronceda y la Sociedad Española de la Época Romántica.*

English.

Lecture courses: 36b, 42a, 44b.

Directed special studies in one of the following: Canadian and American Literature, The Elizabethan Lyric, Sir Walter Scott, Thackeray.

History.**A. CANADIAN HISTORY (1763-1847).**

Lecture courses: History 20a and 21b.

Directed special studies: Candidates will attend seminars, either in Queen's University in winter, or at the Dominion Archives in summer, and must write a thesis based on original printed and MS sources. Work under the Economics department in Canadian economic history may count towards this course of study.

B. MODERN AND MEDIAEVAL HISTORY

Lecture courses: History 14b and 15a.

Directed special studies in one of the following periods: The Age of Elizabeth, The Nineteenth Century, The Later Middle Ages.

Political and Economic Science.

Lecture courses: Any of the following half courses: 10, 12, 39, 56.

Directed special studies in one of the following fields: Socialism, Public Finance, or Public Administration (Professor Skelton). Canadian Financial Organization (Professor W. C. Clark). Agricultural Economics or Labour Problems (Professors Clark and Mackintosh). Canadian Economic History (Professor Mackintosh).

Philosophy.

Lecture courses: Courses 100 and 101 are intended exclusively for candidates for the degree of Master of Arts. Courses 27 and 29 may be counted, if not previously taken.

Directed special studies: Candidates should, with the advice of the Department, select a field of work having a certain unity of interest, and their special subject for private study should be within this field.

Mathematics.

Lecture courses: Any of the half-courses numbered from 20 to 34.

Directed special studies: Certain half-courses from 20 to 34 may be taken in the form of directed special studies, as advised by the Department and approved by the Committee on Studies.

Physics

Lecture courses: A minimum of three lectures a week on topics selected from half-courses 27 to 34.

Directed special studies: Physics A35.

Chemistry

Lecture courses: Two courses selected from 45, 101, 121, 106b, 141b, 171a.

Directed special studies selected from 201, 221, 231, 241, 271.

Biology

Lecture courses to be selected in consultation with the Head of the Department from 15a, 16b, 17a, 18, 19, 24a, 25b, 26, 27, 28, 30. By arrangement with the Departments concerned, some courses in Bacteriology may be substituted for courses in Biology.

Directed special studies in continuance of work already begun.

Geology

Lecture courses: 13 and 19 for those who have covered Honour Group A; and 10 and 15 for those who have covered Honour Group B. See section 4 of the Departmental Regulations.

Directed special studies in one of the fields of paleontology, stratigraphy, petrography, or petrology.

Mineralogy

Lecture courses: 13 and 14 for those who have covered Honour Group A; and 12, 15a and 16b for those who have covered Honour Group B. See section 4 of the Departmental Regulations.

Directed special studies along one of the general lines of Group A or Group B, with Thesis.

II. REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

1. *Pre-requisite work.* Students who wish to begin a Course in the Faculty of Arts leading to the degree of Doctor of Philosophy must have the degree of Bachelor of Arts with Honours or equivalent standing. Those intending to do their work in Queen's Theological College must have the degree of Bachelor of Divinity.

2. *Application.* Application for permission to become a candidate for the degree of Doctor of Philosophy must be made to the Registrar. The applicant, if not a graduate of Queen's University, should send an official certificate giving full details of his previous academic training,

including courses taken and grades received, together with a marked Calendar showing the content of the courses. He should also state in what field he desires to work. The Standing Committee, after satisfying itself as to the ability of the candidate to proceed, will prescribe a suitable Course.

3. *Character of the work.* The degree of Doctor of Philosophy is given not on the ground of long and faithful work, but in recognition of a candidate's mastery of some particular field of study and of his power to offer original treatment of a fitting subject or to carry on original research.

The candidate's mastery of his field will be tested by examination and his ability to handle a problem by a thesis.

4. *Field of Study.* The Course shall consist of a unified programme of study ordinarily not involving work in more than two Departments, and shall be approved by the Standing Committee.

5. *Thesis.* The subject of the Thesis must be approved at least one year before the date of the Final Examination. Not fewer than three typewritten copies must be submitted one month before the date of the Final Examination, together with a Summary. The Thesis must be accepted by the Examination Board before the candidate can proceed to the Final Examination.

A candidate shall ordinarily be required to publish his thesis, either separately or in a learned journal, though in special cases the publication of a summary of the results obtained may be accepted.

6. *Allowance for M.A. work.* The degree of Master of Arts shall count towards the degree of Doctor of Philosophy both as regards work and residence to an amount to be determined by the Standing Committee.

7. *Language requirements.* At least one year before the Final Examination candidates who have not passed French 2 and German 2, or their equivalents, must satisfy the Standing Committee of their ability to make satisfactory use of these two languages. A department may, however, subject to the approval of the Standing Committee, require in place of French or German some other modern language.

8. *Period of study.* The minimum length of the Course shall be three years from the degree of Bachelor of Arts with Honours or its equivalent.

9. *Residence.* The minimum graduate residence required at the University is the equivalent of one full session. No candidate will be allowed to pursue any part of his Course away from the University

unless he can satisfy the Standing Committee that he has proper facilities for study and research.

10. *Examinations.* Written examinations, or other written tests, will be conducted at the end of each session in which a candidate is registered. A candidate may at any time be requested to discontinue his Course.

The Final Examination will be on the whole field of the candidate's study. It will be held at the University on a date fixed by the Standing Committee and will be oral, though a written test may be required in addition.

The Standing Committee shall appoint an Examination Board consisting of the members of Staff of the Departments concerned, together with not fewer than two representatives from other Departments.

11. *Regulations Retroactive.* Candidates who have already registered for the degree of Doctor of Philosophy shall be required to comply with all regulations introduced after the date of their first registration, unless the Standing Committee consider that this will entail undue hardship.

12. *Fees.* The fees shall be as follows:

\$10 for each Session's registration.

\$10 for each Session's examination.

\$100 for tuition for the whole Course.

\$50 on graduation.

Laboratory fees additional.

The following outlines indicate the nature of the work required by the Departments that offer courses leading to the degree of Doctor of Philosophy:

Greek

Candidates in Greek will receive direction in a group of studies, including the general literary history of the classical period, a survey of art and archaeology in Greek lands, and extended reading in poetry and philosophy. Special work will be arranged, if desired, covering part of the Hellenistic age, so as to suit those who may be interested in the society and culture of the eastern Roman provinces and in Christian origins.

Germanics

The course in Germanics presupposes a ready and an accurate command of literary High German, both written and oral.

The work is divided as follows:

A

1. A general and connected knowledge of the cultural and political history of Germany.

2. A general knowledge of the history of German literature.

3. A general knowledge of the history of the Germanic languages, more particularly of German, with a reading knowledge of some of the principal literary monuments of Old High and Middle High German and of Scandinavian (Swedish, Dano-Norwegian) and Netherlandish.

B

1. A special knowledge of the period of German literature from 1750 to 1832, with particular reference to Lessing, Herder, Goethe, and Schiller, and their principal works.

2. A detailed study of any other restricted period of German literature from which the subject of the dissertation is taken.

3. A dissertation indicating independence of research and originality of treatment taken from any period and subject of German literature or of the German language.

History

A. CANADIAN HISTORY.

The attention of candidates for the doctorate in History is called to the outline of work given above for the degree of Master of Arts.

The Department of History has arranged research work in Canadian History to be conducted by lectures and seminars during the months of July and August at the Dominion Archives, Ottawa.

The following is the scope of the field of study:

(a) A history of French institutions transferred to Canada during the French period (see prescription for History 20a).

(b) The history of Canada from 1763 to 1847, studied throughout from first-hand printed sources.

(c) The development of British colonial theory and practice from Edmund Burke to Lord Durham.

(d) Detailed study from first-hand manuscript and printed authorities, preferably at the Dominion Archives, of a special subject to be fixed in consultation with the Professor of History. On this subject a thesis will be written and a bibliography compiled.

(e) In the final examination the candidate's knowledge of British law and institutions founded on Erskine May's Constitutional History of England will be tested.

B. MEDIAEVAL HISTORY.

Provision will be made for research in The Later Middle Ages and the work done will count towards the degree of Ph.D. in Church History.

Political and Economic Science

The course prescribed for candidates for the degree of Ph.D. who are taking a substantial part of their work in the field of Political and Economic Science will in all cases include advanced study of economic and political theory, and special investigations, under the direction of members of the Department, into the Canadian aspects of one or more of the following subjects: Economic history, public finance, private finance, the labour movement and comparative government and jurisprudence.

Philosophy

Candidates will, in consultation with the Department, select their work in one field of study, e.g., Logic, Ethics, Ancient Philosophy. They will be required to show knowledge of the history of their selected subject and a more detailed knowledge of certain philosophical classics, to be read in the original language. The subject of their thesis should be related to their field of study.

Physics

The work will consist of advanced lecture courses, prescribed reading of standard works on Physics and of experimental work in the laboratory. This experimental work will be on some subject for original investigation. The candidate will be at all times under the direction of members of the staff to whom he may come for assistance.

QUEEN'S THEOLOGICAL COLLEGE.

Queen's Theological College offers courses for the degree of Doctor of Philosophy in Old Testament Language and Literature, New Testament Language and Literature, and Church History. Outlines are given in the Calendar of the Theological College.

DEGREES, MEDALS, SCHOLARSHIPS, AND PRIZES,

1921

DEGREES

HONORARY DEGREES

Degree of LL.D.

His Excellency, Baron Byng of Vimy	Ottawa, Ont.
Dean R. W. Brock	Vancouver, B.C.
James Cappon	Kingston, Ont.
C. V. Corless	Coniston, Ont.
Sir Lomer Gouin	Quebec, Que.
Miss Helen Reid	Montreal, Que.
Principal John B. Turner	Hamilton, Ont.

Degree of D.D.

Rev. W. G. Back	Toronto, Ont.
Rev. J. H. Turnbull	Toronto, Ont.

Degree of M.Sc.

James J. Denny	Cobalt, Ont.
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DEGREES BY EXAMINATION

Degree of Ph.D.

Macdonnell, Mrs.) Ursilla N., M.A.	Winnipeg, Ont.
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Degree of M.A.

Albert V. Brown, Ph.D.	Picton, Ont.
John G. Coulson, B.A.	Unionville, Ont.
John W. Darling, B.A.	Lake Opinicon, Ont.
Christina W. Dyde	Kingston, Ont.
William A. Irwin, B.A.	Kingston, Ont.
Helen G. Macdonald, B.A.	Port Henry, N.Y.
Sarah E. Revelle, B.A.	Kingston, Ont.
William Scott, B.A.	Kingston, Ont.
Albert G. Steinberg, B.A.	Brinston, Ont.
John C. Stothers, B.A.	Toronto, Ont.
James Whitehead, B.A.	Toronto, Ont.

Degree of B.A. (with Honours)

Bamforth, F. R. (Mathematics and Physics)	Deseronto, Ont.
Brown, Dorothy L. (English and History)	Ottawa, Ont.
Burnett, Elizabeth M. (English and History)	Ottawa, Ont.
Chrysler, Herbert W. (English and History)	Brantford, Ont.
Croal, Albert G. (Biology and Chemistry)	Hamilton, Ont.
Diltz, Bert C. (English and History)	Bronte, Ont.
Emery, Geo. A. R. (History and Economics)	Kingston, Ont.
French, Wm. E. (Mathematics and Physics)	Oshawa, Ont.

Gillan, Francis H. (Science)	Pakenham, Ont.
Kehoe, M. B. (Mathematics and Physics) ..	Stratford, Ont.
Kelly, Norman S. (English and History) ..	Cataraqui, Ont.
Messer, Cora M. (English and History) ..	Wexford, Ont.
O'Brian, Mabel B. (Mathematics and Physics)	L'Orignal, Ont.
Stewart, Emma C. (Biology and Chem- istry)	Brownburg, Que.
Thain, May (English and Philosophy)	Campbellford, Ont.
Tuttle, Edith A. (Mathematics and Physics)	Tweed, Ont.
Wallace, Andrew (Mathematics and Physics)	Wingham, Ont.
Wholton, Thomas H. (Science)	Hamilton, Ont.

Degree of B.A. (Pass)

Allan, Lois M.	Kingston, Ont.
Anderson, A. C.	Wingham, Ont.
Atkinson, F. H.	Toronto, Ont.
Austin, Prudence M.	Simcoe, Ont.
Balfour, H. E.	Edmonton, Alta.
Beaupre, Cecilia	Niagara Falls, N.Y.
Bell, H. J.	Saskatoon, Sask.
Bennett, W. G.	Kingston, Ont.
Bissonnette, R. N.	Stirling, Ont.
Booth, C. W.	Workworth, Ont.
Breidtfjord, M. A. S.	Tilbury, Ont.
Cameron, J. A.	Toronto, Ont.
Campbell, Minnie M.	Goderich, Ont.
Campney, R. O.	Picton, Ont.
Chapman, B. P.	Swift Current, Sask.
Chisholm, Agnes	Lancaster, Ont.
Chown, Myrtle E.	Kingston, Ont.
Christiansen, C. M.	Dickson, Alta.
Chrysler, H. W.	Brantford, Ont.
Cliff, Mary T.	Portsmouth, Ont.
Cole, Florence I.	Ottawa, Ont.
Coley, A. F.	Steven, Sask.
Condie, Agnes M.	Bainsville, Ont.
Craig, Helen E.	Cornwall, Ont.
Cruikshank, Margaret C.	Boston 19, Mass.
Curry, Mary R.	Kingston, Ont.
Desrochers, Lillian M.	Haileybury, Ont.
Dickson, Marion C.	Toronto, Ont.
Dunbar, J.	Vancouver, B.C.
Dunne, Anna M.	Ottawa, Ont.
Durnin, Letitia E.	Goderich, Ont.
Elliott, Jessie C.	Winchester, Ont.
England, R.	Hafford, Sask.
Evanson, Ruth	Prescott, Ont.
Ewart, Jessie E.	Petrolia, Ont.
Fenton, Hazel S.	Brockville, Ont.
Ferrier, Vera	Renfrew, Ont.
Fredenburgh (Mrs.) M. E. S.	Brockville, Ont.
Fry, R. G.	Kenaston, Sask.
Garrett, Evelyn C.	Walkerville, Ont.

Gilbert, A. F. S.	Peterboro, Ont.
Gillan, F. H.	Pakenham, Ont.
Grant, Lucy	Belleville, Ont.
Hallett, Mildred E.	Ottawa, Ont.
Halpenny, D. M.	Kemptville, Ont.
Handford, Edith L.	Renfrew, Ont.
Hermiston, Ruth	Cornwall, Ont.
Hodgins, W. C.	Kingston, Ont.
Holdcroft, W. P. R.	Havelock, Ont.
Hunter, J.	Broderick, Sask.
Jardine, Mildred B.	Newington, Ont.
Johnston, Mabel M.	Pendleton, Ont.
Jones, W. C.	Carman, Man.
Kennedy, Sister Elizabeth	St. Raphaels West, Ont.
Laird, J. E.	Hamilton, Ont.
Leckie, Edith H.	Stratford, Ont.
Leppard, C. E.	Calgary, Alta.
Manning, E. D.	Tweed, Ont.
Maxwell, G. N.	Gananoque, Ont.
Meng, L. H.	Napanee, Ont.
Merkley, L. R.	Williamsburg, Ont.
Milling, Edith G.	Napanee, Ont.
Moses, Thelma	Ottawa, Ont.
Murray, J.	Vancouver, B.C.
MacArthur, Jennie	Lancaster, Ont.
McCann, W. S., Ph.D.	Kingston, Ont.
MacDonald, J. A.	Beeton, Ont.
McGregor, Mary R.	Chatham, Ont.
MacLeod, D. J.	Dunvegan, Ont.
McLeod, P. A.	Kingston, Ont.
MacLeod, W. H.	Detroit, Mich.
McMaster, D. A.	Cookstown, Ont.
McNamee, Kathleen C.	Kingston, Ont.
Nelson, Mabel E.	Vankleek Hill, Ont.
Newlove, T. H.	Loreburn, Sask.
Newman, Mildred E.	Kingston, Ont.
Norris, R. H.	Markham, Ont.
Powell, W.	Bonavista, Nfld.
Prueter, H. J.	Toronto, Ont.
Ransom, A. B.	Kingston, Ont.
Raper, J. (ad eundem)	Benton, England.
Read, Bessie R.	Westboro, Ont.
Redmond, Mildred I.	Bath Road, Ont.
Reed, Sister Agnes	Alexandria, Ont.
Richardson, H. A.	Brockville, Ont.
Robinson, Annie F.	Markham, Ont.
Sadler, G. H. L.	Kinbourn, Ont.
Salsbury, Nina O.	Camden East, Ont.
Sauve, J. E. F.	Alexandria, Ont.
Serson, A. V. L.	Marcellus, N.Y.
Shannette, Katherine M.	Williamsburg, Ont.
Shaw, Edna L.	Arnprior, Ont.
Slater, D.	Kingston, Ont.
Smith, J. M. F.	Hampshire, England.
Smith, L. B.	Brockville, Ont.
Sparks, Ella E.	St. Catharines, Ont.

GRADUATE COURSES

Stevenson, G. O.	Ottawa, Ont.
Stewart, Margaret S.	Renfrew, Ont.
Stothers, C. E.	Toronto, Ont.
Strachan, D. L.	Hanover, Ont.
Tait, Mildred J.	Bainsville, Ont.
Thomas, N. J.	St. Thomas, Ont.
Townend, J. B.	Middleville, Ont.
Varnum, D. P.	Kingston, Ont.
Veitch, M. R.	Clair, Sask.
Wert, Agnes G.	Avonmore, Ont.
Wert, Dorothy	Wales, Ont.
Wheable, G. A.	London, Ont.
White, H. C.	Aylmer West, Ont.
White, L. J.	Whitevale, Ont.
Wholton, T. H.	Hamilton, Ont.
Williams, L. T.	Strathmore, Ont.
Willson, Florence M.	Athens, Ont.
Wilton, Helen I.	Kingston, Ont.
Wright, N. R.	Ottawa, Ont.
• Yoerger, C. L.	Humboldt, Sask.
Young, Janet M.	Brigden, Ont.
Yule, L. B.	Listowel, Ont.
Degree of B.A. on the Combined B.A.M.D. Course.	
Applebe, C. S.	Parry Sound, Ont.
Edwards, H. L.	Souris, Man.
Faulkner, T. W.	Cooksville, Ont.
Fawcett, A. M.	Minneapolis, Man.
Holdcroft, D. J.	Havelock, Ont.

Degree of B. Com.

Black, W. E., B.A.	Westmount, Que.
Oates, T. W., B.A.	London, Ont.

Degree of B.Paed.

Miller, G. A., M.A.	Ottawa, Ont.
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Degree of B.D.

Breidjford, M. A. S., B.A.	Tilbury, Ont.
McArthur, C. P., B.A.	Martintown, Ont.
Patterson, N. D., B.A.	Kingston, Ont.

MEDALS

Medal in Greek	No award.
Medal in German	No award.
Medal in French	Marion D. Laird, Toronto, Ont.
Medal in English	Edna Shaw, B.A., Arnprior, Ont.
Medal in History	W. A. Irwin, M.A., Kingston, Ont.
Medal in Political and Economic Science	W. A. Irwin, M.A., Kingston, Ont.
Medal in Mental Philosophy	D. P. Varnum, B.A., Kingston, Ont.
Medal in Mathematics	F. R. Bamforth, B.A., Deseronto, Ont.
Medal in Chemistry	J. G. Coulson, B.A., Unionville, Ont.
Medal in Biology	H. C. White, M.A., Aylmer, Ont.

SCHOLARSHIPS AND PRIZES

The Andrew Haydon Scholarship in Colonial History	\$50
Edna L. L. Shaw, B.A., Arnprior, Ont.	
The W. M. O. Lochhead Scholarship in Political Science	\$50
N. Campbell, Cedarville, Ont.	\$25
Genevieve Bullock, South Bend, Ind.	\$25
The P. D. Ross Scholarship in Commerce	\$150
W. G. Bennett, B.A., Kingston, Ont.	
Alexander Laird Scholarship in English 1.....	\$50
C. E. Lyght, Hamilton, Ont.	
The Maclellan Scholarship in Greek	\$25
Georgina Conklin, Brockville, Ont.	
The N. F. Dupuis Scholarship in Mathematics.....	\$60
D. J. MacDonald, Dalhousie Station, Que.	
The William Moffat Scholarship in Chemistry	\$50
J. Townsend, Clinton, Ont.	
Gowan Foundation No. II. (Botany)	\$25
A. G. Croal, B.A., Hamilton, Ont.	
Gowan Foundation No. III. (Economics)	Books
R. O. Campney, B.A., Picton, Ont.	
Latin and Greek Composition	Books
Latin Composition, Marion D. McFadyen, Kingston, Ont.	
V. K. Greer Prizes in Mathematics	Books
Senior—M. B. Kehoe, B.A., Stratford, Ont.	
Junior—E. C. Gill, Kingston, Ont.	
Special Prize in German	Books
J. P. Young, Nobel, Ont.	
Special Prize in French 2	Books
Marion D. McFadyen, Kingston, Ont.	
James C. Rogers Prize in English	Books
S. D. Rendall, Plattsville, Ont.	
Special Prize in Spanish 2	Books
E. E. C. Ratchford, Amherst, N.S.	
Hispanic Society of America Prize	Books
Mildred Hallett, B.A., Ottawa, Ont.	
Special Prize in Italian	Books
Ella Sparks, B.A., St. Catharines, Ont.	

ARTS RESEARCH FELLOWSHIPS.

(Awarded April, 1922.)

Mildred Hallett, B.A., Ottawa, Ont., Travelling Fellowship	\$500
Agnes MacKercher, Wroxeter, Ont., Resident Fellowship	\$250
R. W. Cumberland, Kingston, Ont., Resident Fellowship	\$250

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